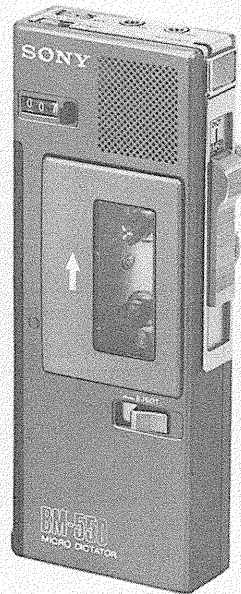


# BM-550

US Model  
AEP Model



MICRO DICTATOR

## SPECIFICATIONS

Tape	<b>MICROCASSETTE</b> <sup>TM</sup>
Tape speeds	2.4 cm/sec. ( $15/16$ ips), 1.2 cm/sec. ( $15/32$ ips)
Speaker	Approx. 2.8 cm (1 1/8 inches) dia.
Power output	250 mW (at 10% harmonic distortion)
Power requirements	3 V dc, two size AAA batteries (IEC designation R03), or optional Sony BP-42 rechargeable battery pack DC IN 3 V jack accepts: AC-39 ac power adaptor (optional) for use on 120 V ac, 60 Hz DCC-127A car battery cord (optional) and PC-200 dc plug adaptor (optional) for use on 12 V car battery Continuous recording hours with built-in microphone: Approx. 6.5 hours (average) with alkaline batteries
Battery life	
Dimensions	Approx. 50 x 134 x 20.2 mm (w/h/d) (2 x $59/32$ x $13/16$ inches) not incl. projecting parts and controls
Weight	Approx. 195 g (6.9 oz) incl. batteries

0 dB = 0.775 V



# SONY<sup>®</sup>

## SERVICE MANUAL

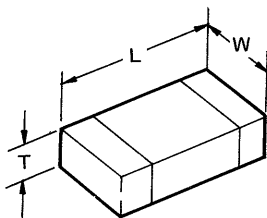
## SERVICING NOTE

### Chip components

Chip components include resistors, capacitors, transistors, diodes, coil and adjustable resistors.

In this section, the types of resistors, ceramic capacitors, transistors and diodes which are used most frequently will be described.

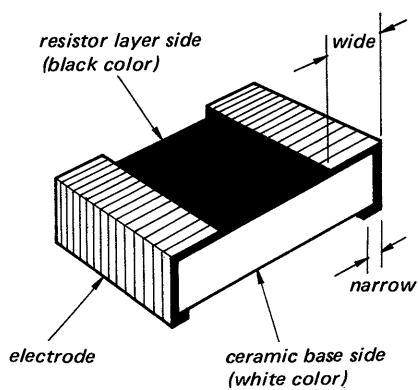
Dimension of transistors and capacitors



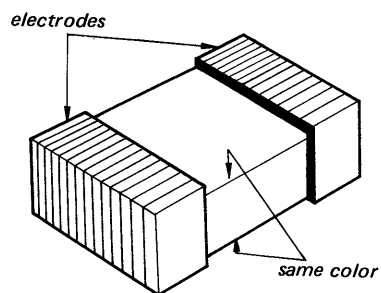
(Unit: mm)

Type	L	W	T
3216	3.2	1.6	0.45 ~ 0.6
2125	2.0	1.25	0.35 ~ 0.5

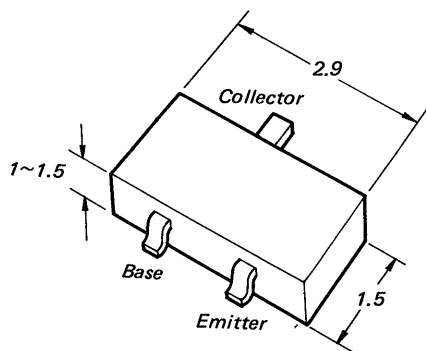
### Identification



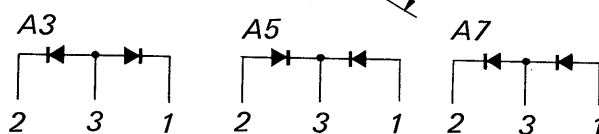
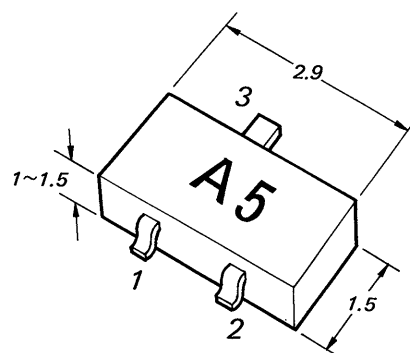
Resistor



Laminated Ceramic Capacitor



Transistor



Diode

### Replacing chip components

All chip components should be connected and disconnected, using a tapered soldering iron [temperature of the iron tip: less than 280°C (536°F)], a pair of tweezers and braided wire.

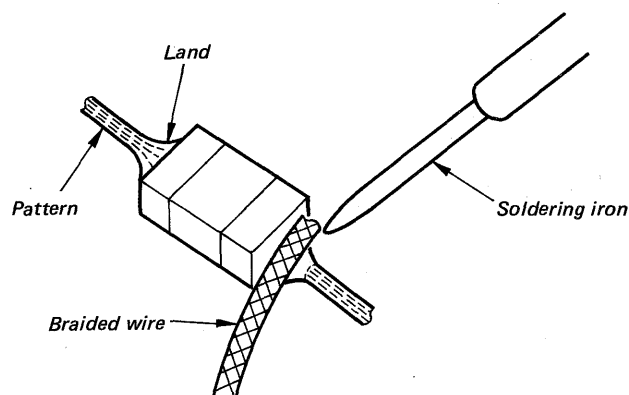
#### Precautions for replacement

1. Do not disconnect the chip component forcefully. Otherwise, the pattern may peel off.
2. Never re-use a disconnected chip component. Dispose of all old chip components.
3. To protect the chip component, heating time for attaching the component should be within 3 seconds.

#### ○ Removing chip components

##### (1) Removing solder at electrode

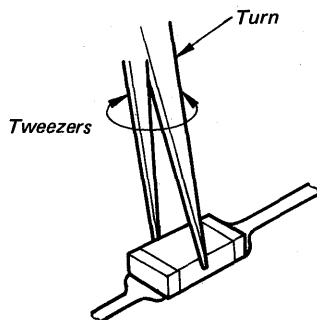
Remove the solder at the electrode, using a thin braided wire. Do not remove the solder of the part (chip component) attached adjacent to the electrode.



##### (2) Disconnecting chip components

Turn the tweezers with the soldering iron alternately applied to both electrodes, and the chip component will be disconnected. Take careful precautions while disconnecting, because if the chip component is forcefully removed the land may peel off.

Never re-use a disconnected chip component.



##### (3) Smoothing the soldered surface

After disconnecting the chip component, remove the solder by using a braided wire to smooth the land surface.

#### ○ Connecting chip components

The value of chip components is not displayed on the main body. Take due precautions to avoid mixing new chip components with other ones.

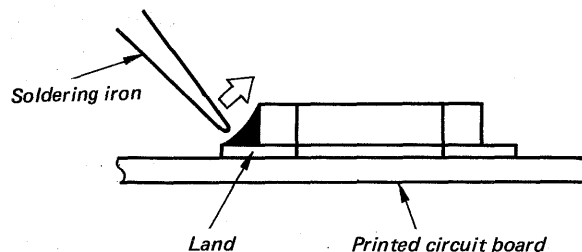
##### (1) Applying solder to land on one side

Apply a thin layer of solder to the land on one side where the chip component is to be connected. Too much solder may cause bridging.



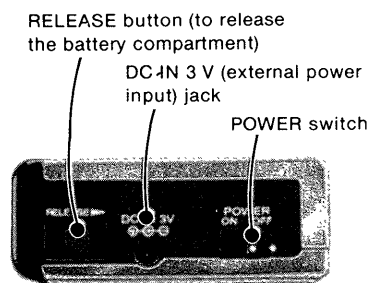
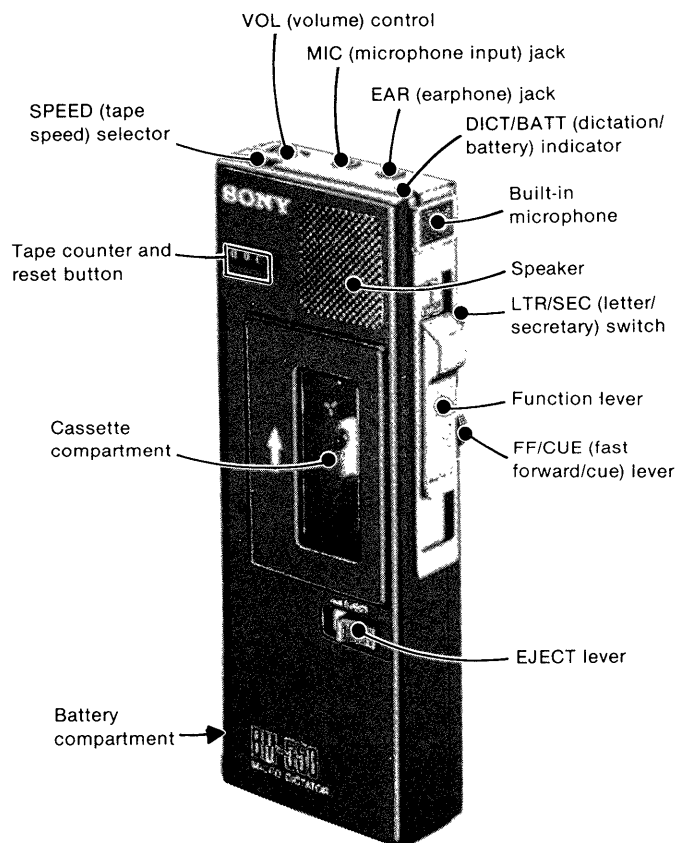
##### (2) Speedy soldering

Hold the chip component at the desired position, using tweezers, and apply the soldering iron in the arrow-marked direction. To protect the chip component, heating time should be within 3 seconds.



##### (3) Speedy soldering of electrode on the other side

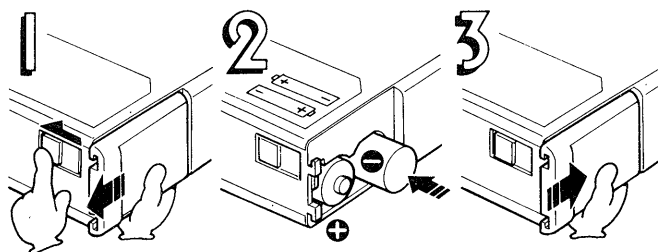
Solder the electrode on the other side in the same way as in (2) above.

**PARTS IDENTIFICATION**

## BATTERY INSTALLATION

Insert two size AAA batteries (IEC designation R03), following the illustrations.

Alkaline batteries are recommended.

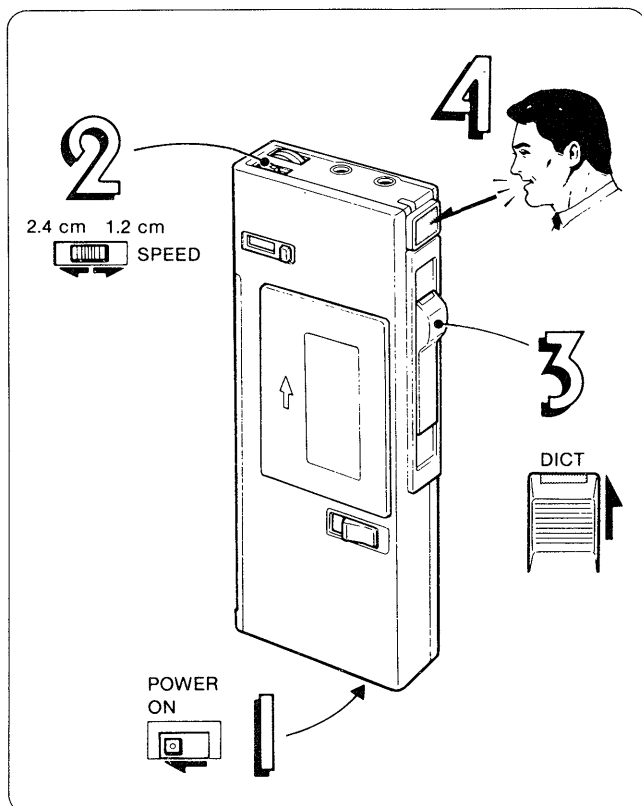


## DICTATION

After inserting batteries and a cassette, operate the set following the illustrations.

With the BM-550, even a cassette with the tabs removed can be recorded, and **previous recordings are automatically erased.**

- For indexing the tape contents, set the tape counter to 000 by pushing the reset button.
- The DICT/BATT indicator flickers during recording.



### Tape SPEED selector

**2.4 cm:** Provides 60 minutes of dictating time on both sides of the MC-60BM Microcassette. Recommended for normal dictation.

**1.2 cm:** Provides 120 minutes of dictating time on both sides of the MC-60BM Microcassette. Recommended for conference recording or lengthy dictation.

### How to use the LTR/SEC switch

This function operates only in the dictate mode. To give instructions to your secretary, pull the switch down to the SEC position, an electronic index signal will be recorded on the tape. At the end of a letter, push the switch up to the LTR position, an electronic index signal will again be recorded on the tape.

When dictation is completed, remove the tape without rewinding.

When using the optional Sony BM-750 micro dictator/transcriber, the SEC and LTR marks are shown on the liquid crystal index display in the SCAN mode.

When using Sony Microcassette desk tops, the tape will stop automatically at each electronic index signal in the fast forward, backspace or rewind mode by the automatic stop function.



Push up to record an electronic index signal at the end of a letter.

Push down to record an electronic index signal and record instructions to the secretary.

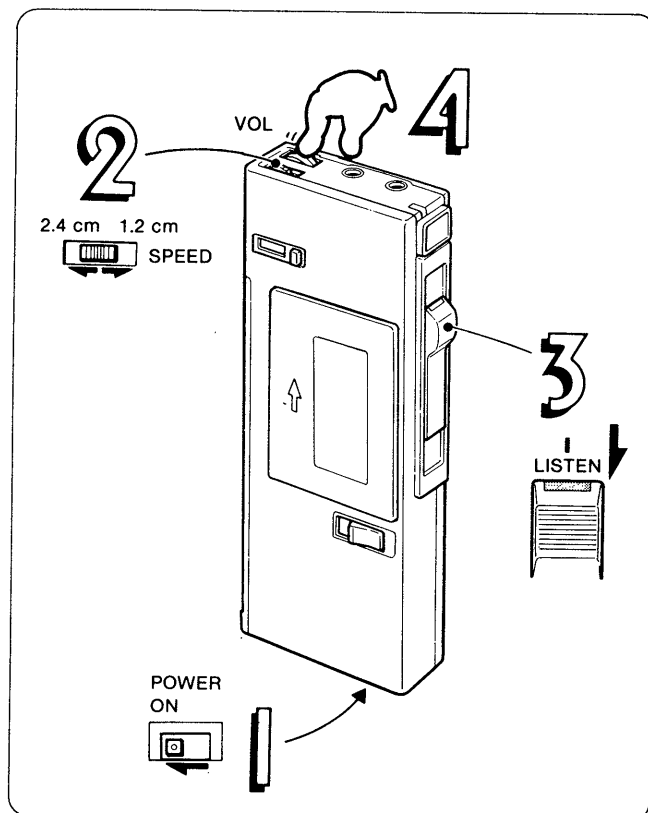
**With an external microphone with a miniplug (optional),** connect the microphone to the MIC jack, and set the BM-550 in the dictate mode. The built-in microphone is disconnected automatically.

**For telephone recording,** connect the TP-5S telephone pickup (optional) to the MIC jack, and set the BM-550 in the dictate mode. Refer to the instruction manual of the TP-5S.

## PLAYBACK

After inserting batteries and a recorded cassette, operate the unit following the illustrations.

- For private listening, connect the earphone to the EAR jack.
- During playback, the DICT/BATT indicator lights.



To stop dictating or playback, set the function lever to STOP.

To review your dictation, slide the function lever down to the BACK SPACE position to rewind the tape. At the desired portion, release the function lever, and the recorded material will be heard.

To fast forward the tape, slide the FF/CUE lever in the direction of the arrow, with the function lever set to STOP. To stop the tape, release the FF/CUE lever.

### CUE FUNCTION

During playback, you may skip-over unnecessary portions by sliding the FF/CUE lever in the direction of the arrow. When you release the lever, the unit will automatically return to the playback mode.

### END ALARM

In any mode, the end alarm will sound at the end of the tape. To stop the alarm, set the function lever to STOP.

### POWER SWITCH

With the POWER switch ON, the BM-550's amplifier and motor will not turn off immediately when the function lever is set to STOP. After about 1.5 minutes, the unit will automatically turn off.

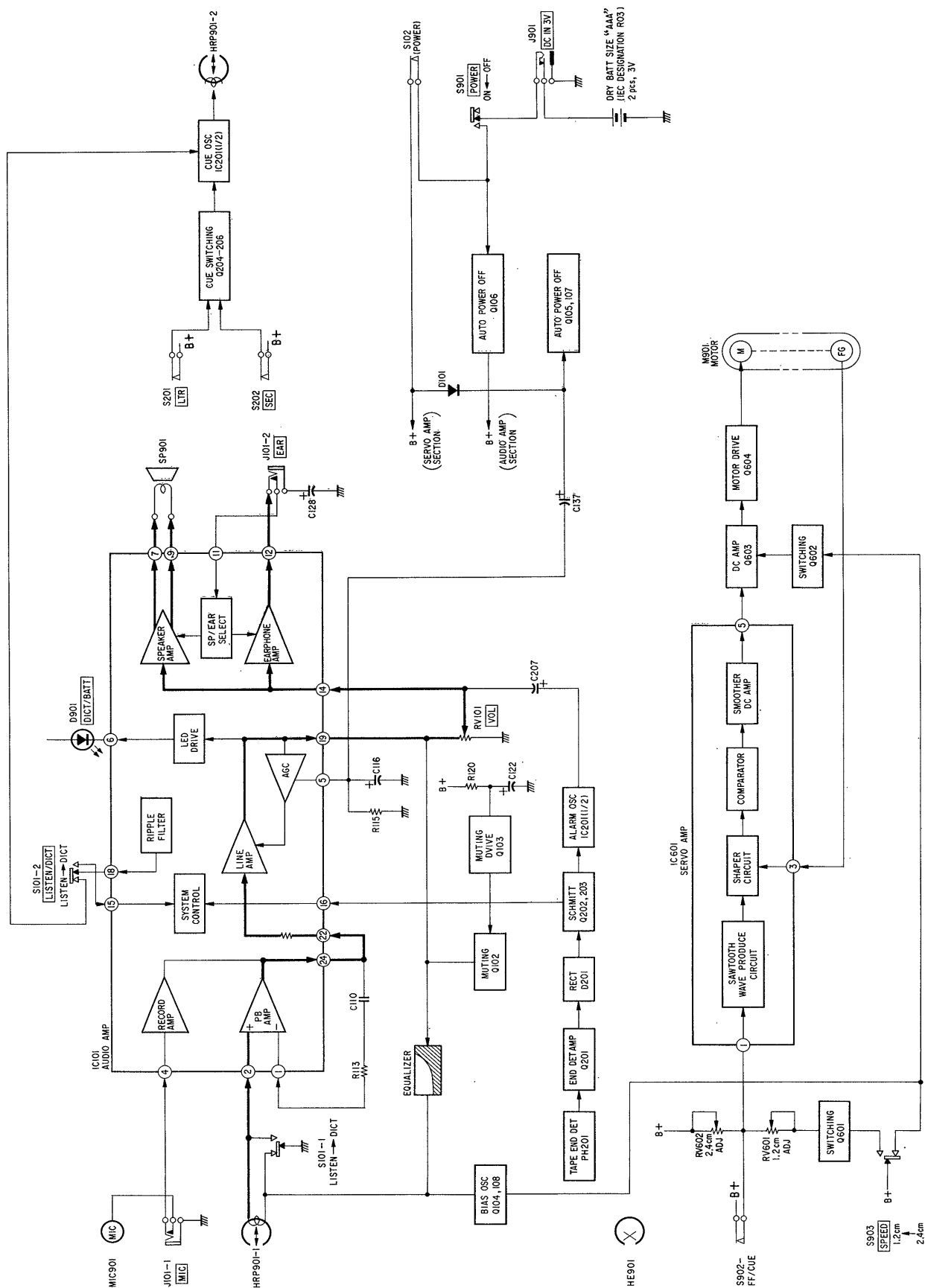
With this switch OFF, the unit will not turn on, even if the function lever is set to an operating mode by mistake, so that the batteries will be conserved.

### ERASING WITHOUT RECORDING

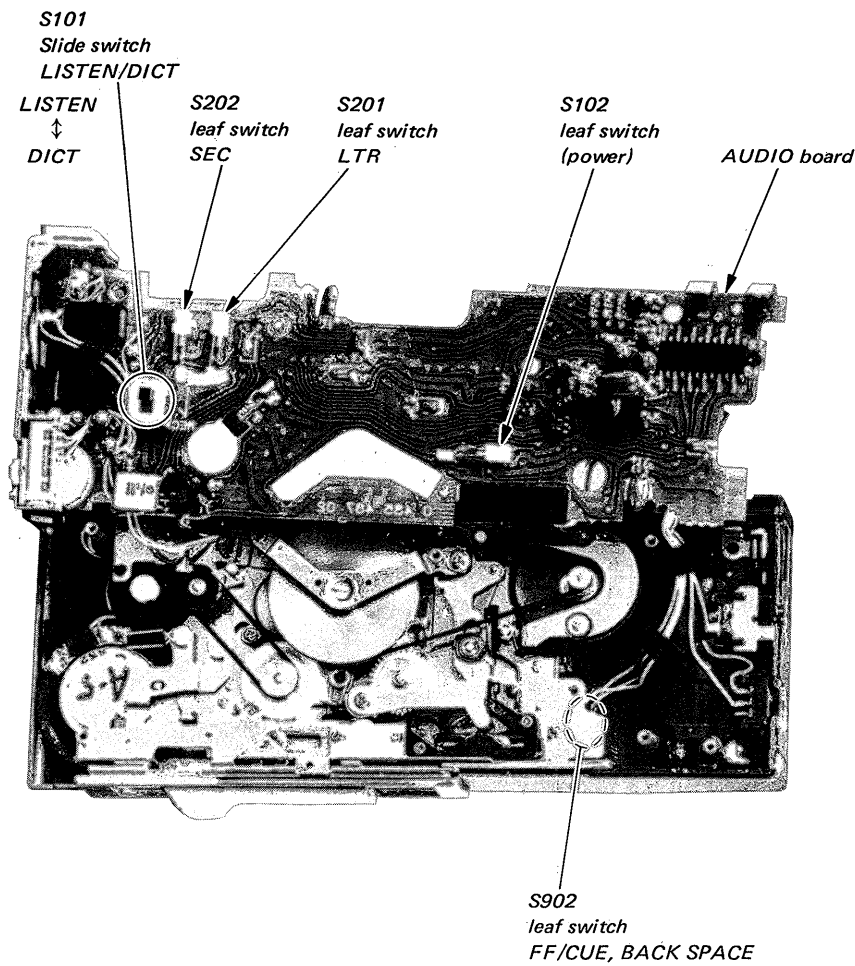
Insert the supplied SP-100 shorting plug in the MIC jack, and place the BM-550 in the dictate mode. Erasing will begin. After erasing, be sure to disconnect the SP-100.

# SECTION 1 OUTLINE

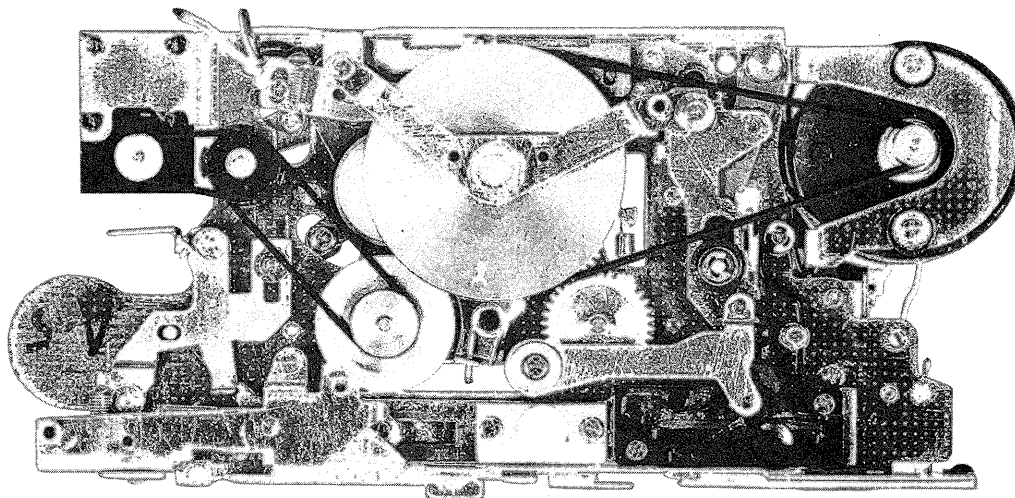
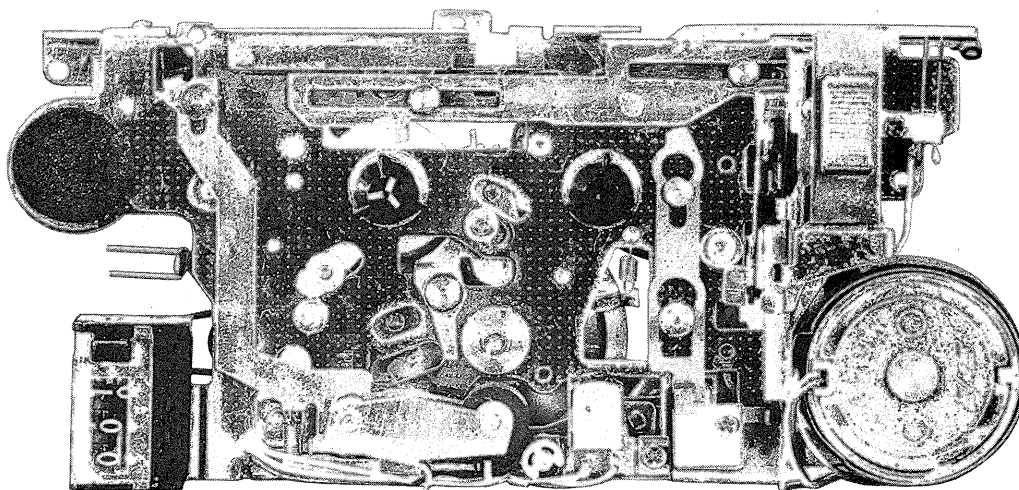
## 1-1. BLOCK DIAGRAM



**1-2. INTERNAL VIEW (1)**



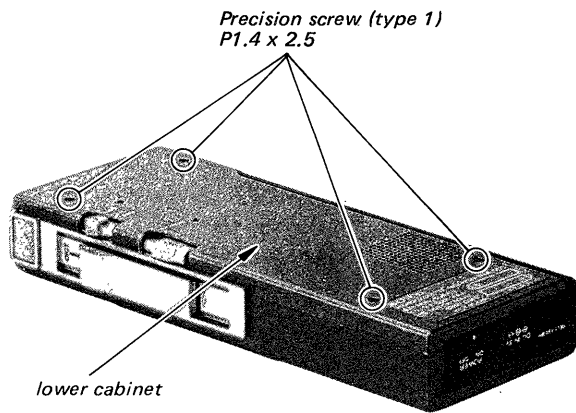


**INTERNAL VIEW (2)****INTERNAL VIEW (3)**

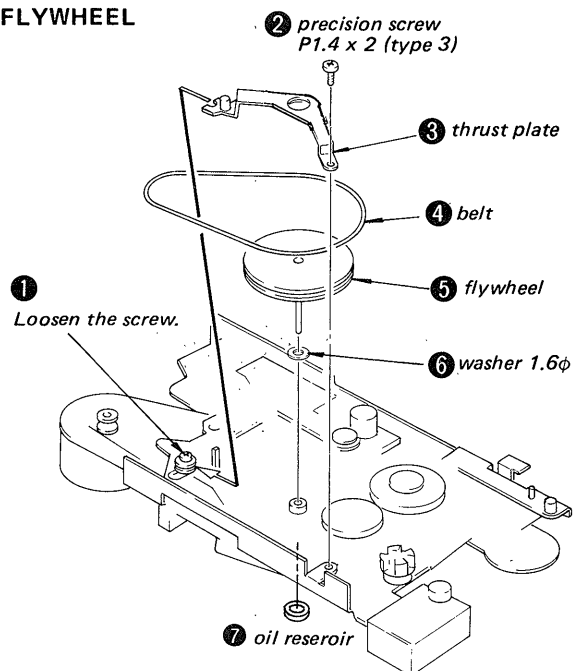
## SECTION 2 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

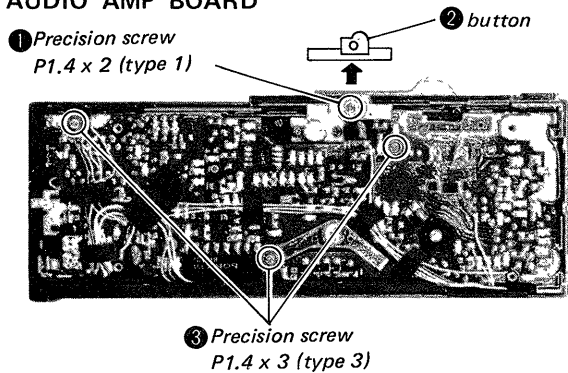
### LOWER CABINET



### FLYWHEEL

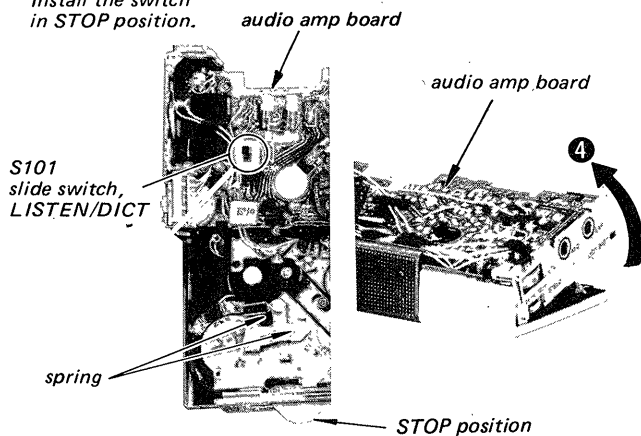


### AUDIO AMP BOARD

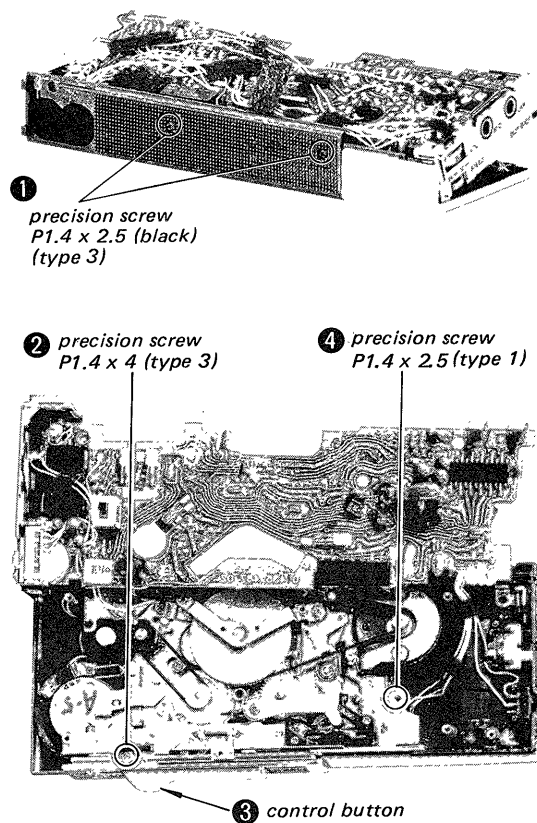


#### • INSTALLATION

Install the switch  
in STOP position.

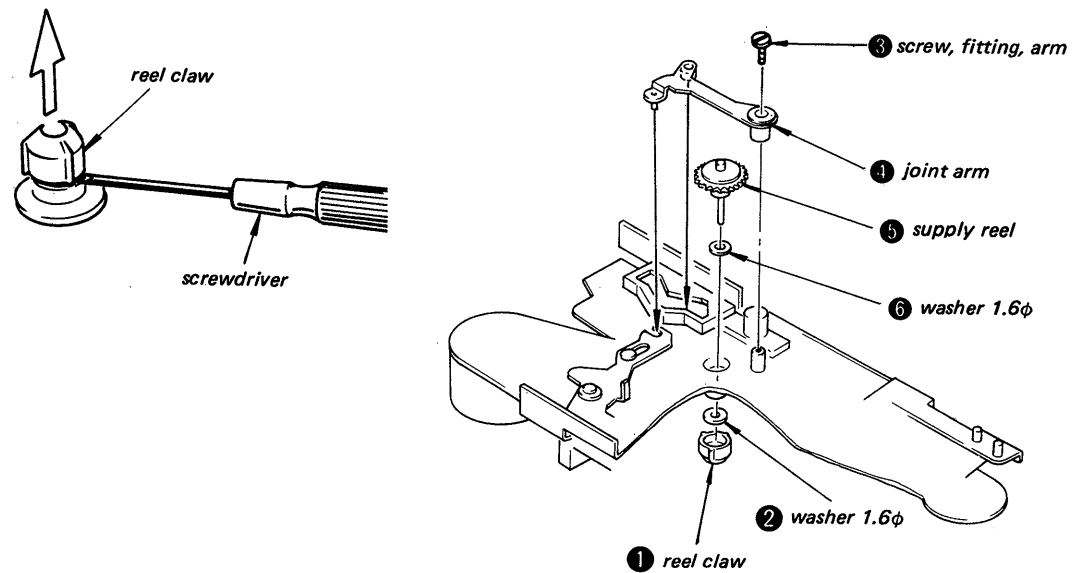


### MECHANICAL SECTION

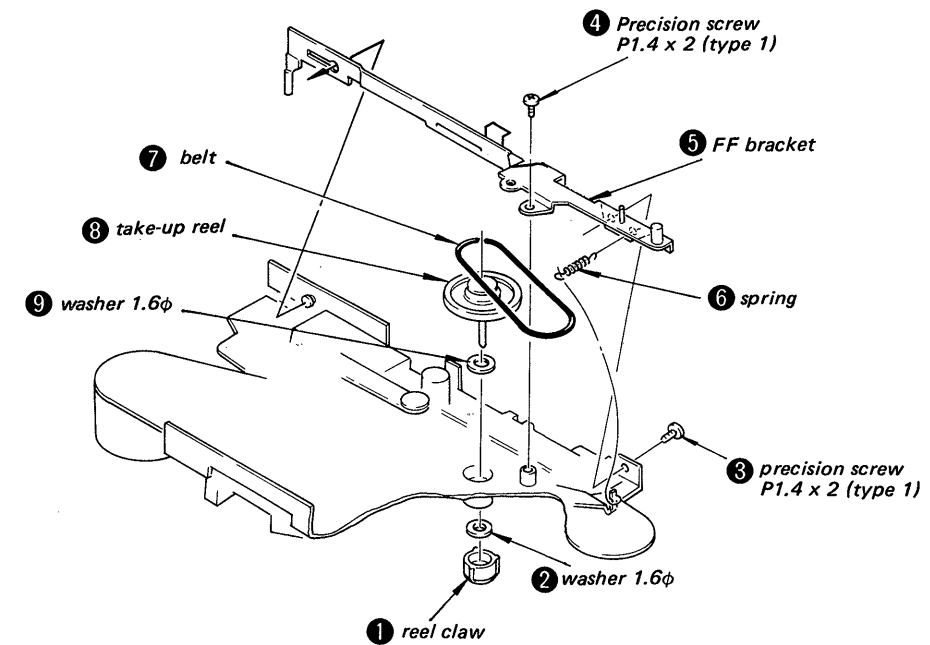


# SUPPLY REEL/TAKE-UP REEL

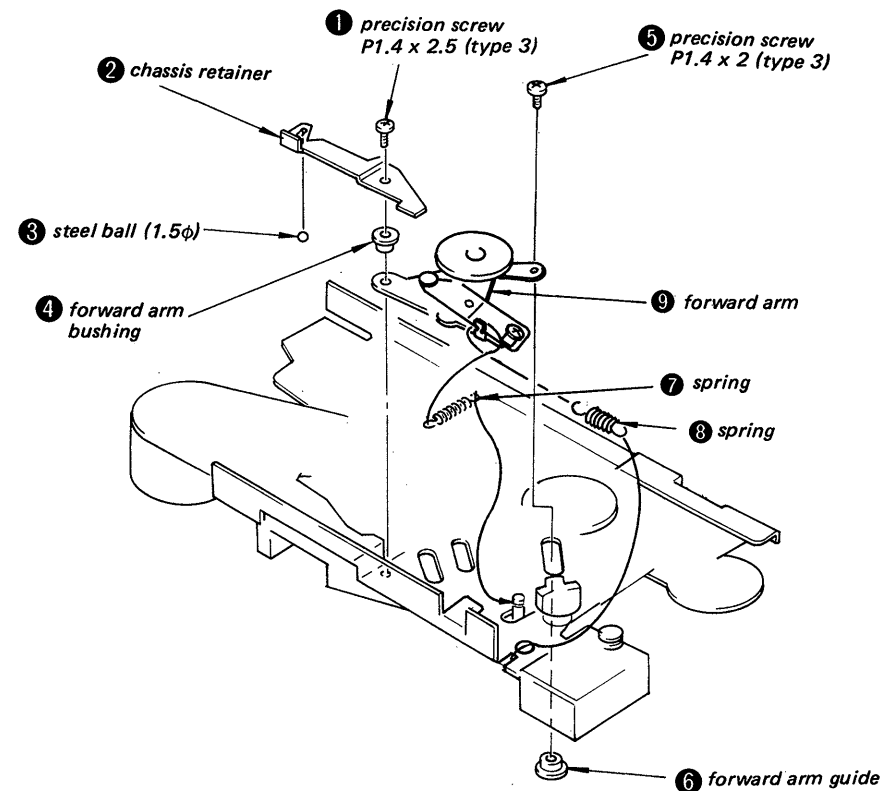
## • SUPPLY REEL



## • TAKE-UP REEL

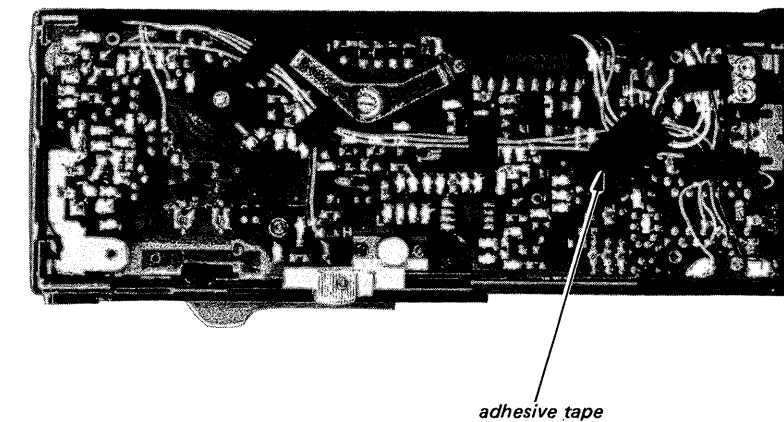


## FORWARD ARM



## WIRE ARRANGEMENT

- Secure the wires with adhesive tape.



## SECTION 3

### ADJUSTMENTS

#### 3-1. MECHANICAL ADJUSTMENTS

##### PRECAUTION

- Clean the following parts with a denatured-alcohol-moistened swab:
 

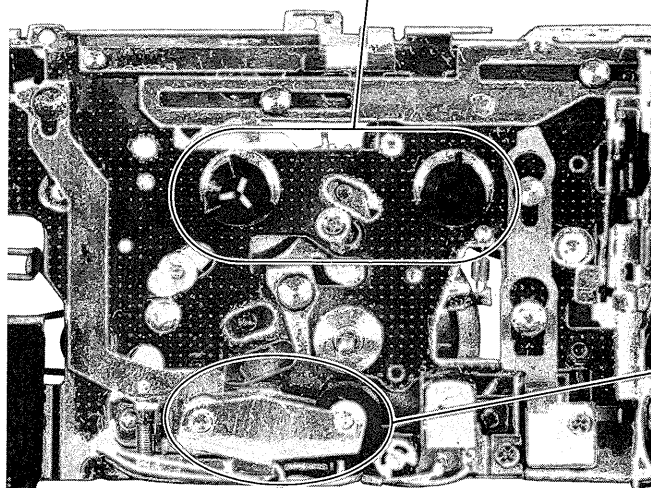
record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
- Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage (dc 2.5 V) unless otherwise noted.

##### Torque Measurement

Power Voltage: 3 V

SPEED switch: 2.4 cm

Mode	Torque meter (Cassette type)	Torque
LISTEN	CQ-103M	5 ~ 12 g·cm (0.069 ~ 0.167 oz·inch)
FF	CQ-201M	more than 5 g·cm (more than 0.069 oz·inch)
BACK SPACE	CQ-201M	more than 14 g·cm (more than 0.19 oz·inch)

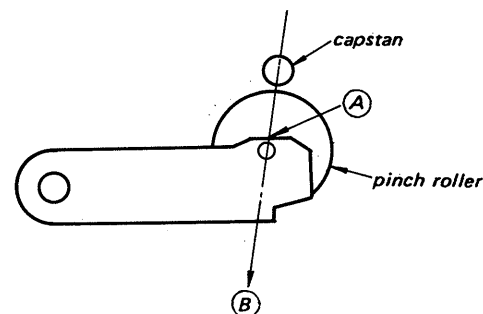


##### Pinch Roller Pressure Adjustment

###### — Playback Mode —

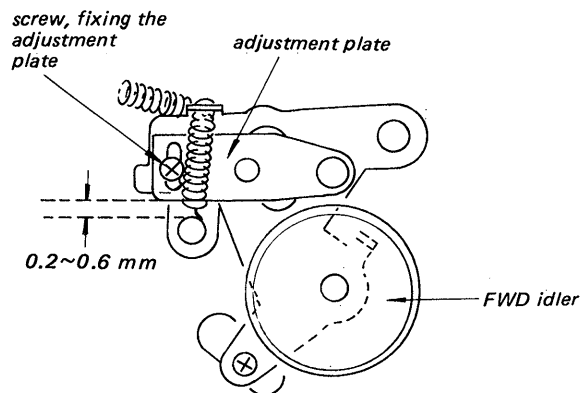
- Hook the spring scale (300g) to the portion shown by the arrow (A).
- Detach the pinch roller from the capstan in the direction shown by the arrow (B).
- Slowly return the pinch roller and read the spring scale just when the pinch roller starts rotating.

Specification: 90 ~ 105 g (1.25 ~ 1.46 oz)

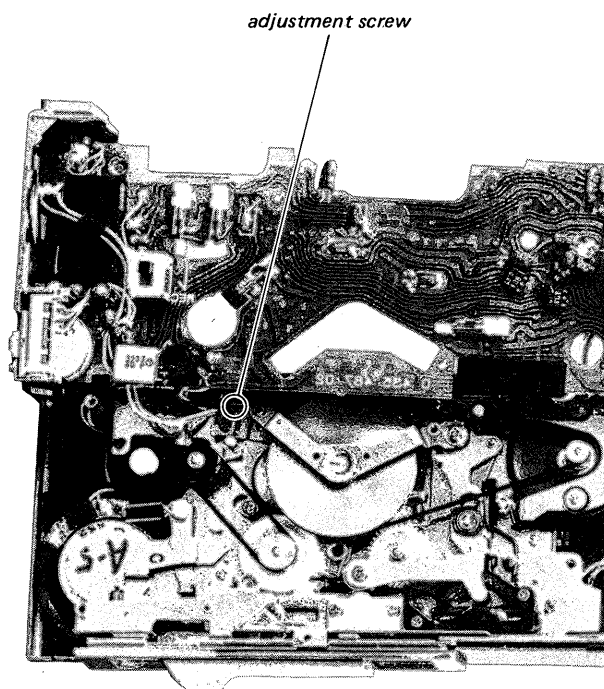


## TIMING ADJUSTMENT

1. When take-up reel spindle rotates in LISTEN mode, confirm that the pinch roller presses to capstan and they rotate.
2. When they are not correctly rotate, adjust the place of adjustment plate.

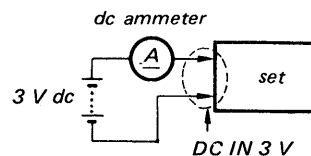


### Adjustment Location:



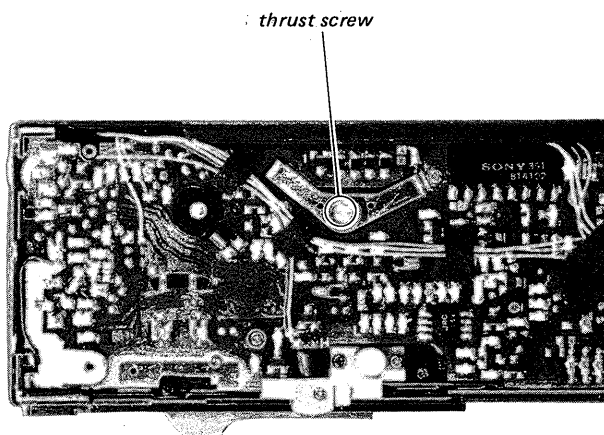
## Flywheel Thrust Play Adjustment

### — LISTEN Mode —



1. Turn the thrust screw counterclockwise until the screw tip leaves from the flywheel shaft.
2. Gradually turn the thrust screw clockwise to the position where the motor current suddenly increases.
3. Then, turn the thrust screw counterclockwise about  $\frac{1}{4}$  turn from the position obtained in step 2.

### Adjustment Location:



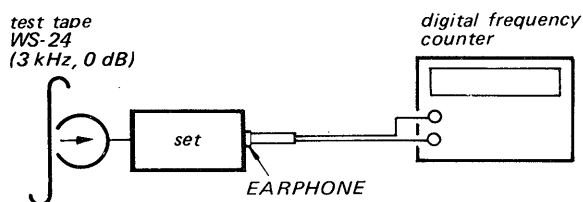
# Tape Speed Adjustment

## Setting:

VOLUME control: mechanical mid

## Procedure:

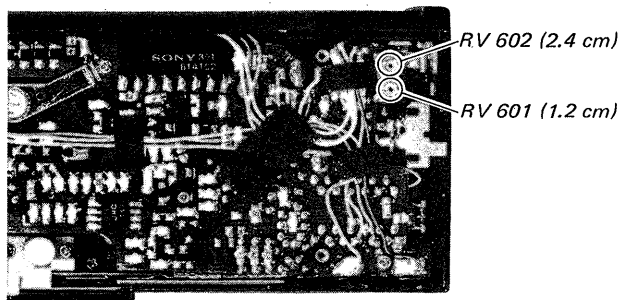
Mode: playback



1. Set the SPEED switch to 2.4 cm.
2. Adjust RV602 to obtain the specified value.
3. Set the SPEED switch to 1.2 cm.
4. Adjust RV601 to obtain the specified value.

SPEED	Digital Frequency Counter
2.4 cm	2985 ~ 3015 Hz
1.2 cm	1494 ~ 1506 Hz

## Adjustment Location:

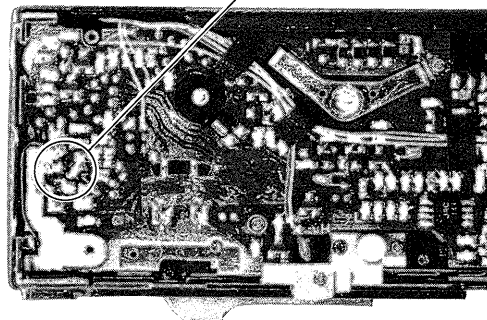
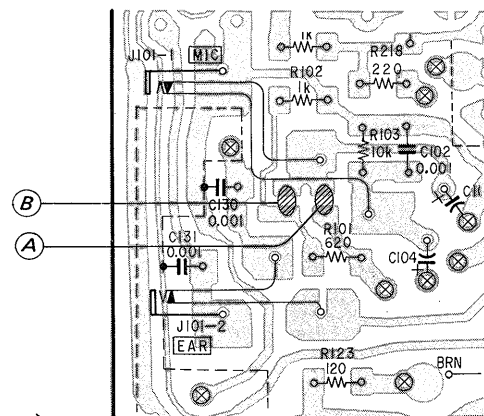


# Microphone Sensitivity Adjustment

1. In using an electret condenser microphone with a color mark on the microphone holder, solder the pattern as shown below.

Black ..... (A)  
Red ..... (B)

## Adjustment Location:



**Record/playback Head Azimuth Adjustment****Setting:**

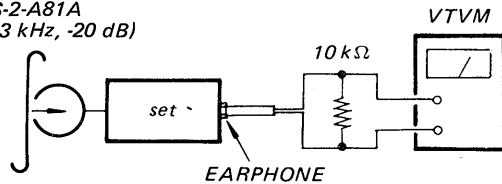
VOLUME control: mechanical mid

SPEED switch: 2.4 cm

**Procedure:**

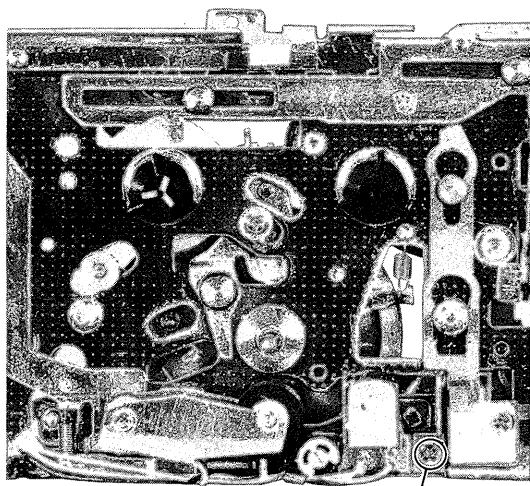
1. Mode: playback

*test tape*  
S-2-A81A  
(3 kHz, -20 dB)



2. Turn the adjustment screw for maximum VTVM reading.

**Note:** Several peaks may appear, but take the maximum.

**Adjustment Location:**

*adjustment screw*

# Record Bias Adjustment

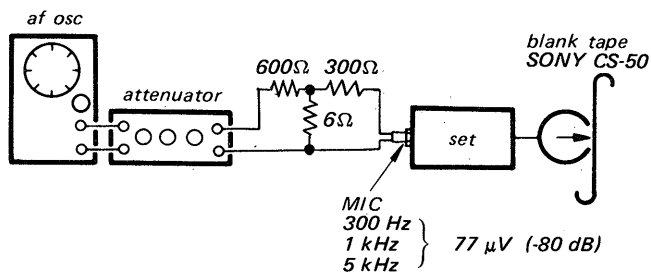
## Setting:

SPEED switch: 2.4 cm

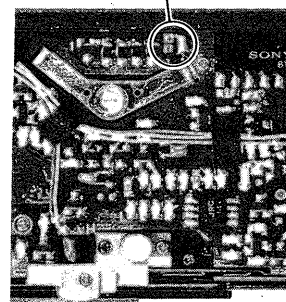
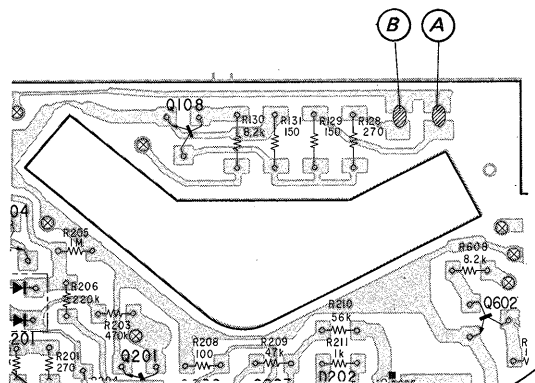
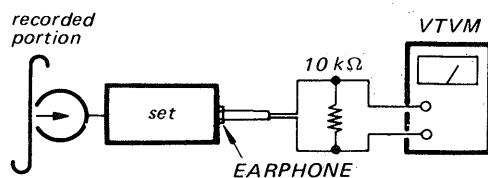
## Adjustment Location:

## Procedure:

1. Mode: record



2. Mode: playback



Record signal	VTVM reading
1 kHz	Adjust PB VOL control for -20 dB (77 mV).
300 Hz	Should be $-29 \pm 4$ dB (17 ~ 44 mV)
5 kHz	Should be $-30 \pm 4$ dB (16 ~ 39 mV)

If necessary, change the soldering portions and repeat the steps 1 and 2.

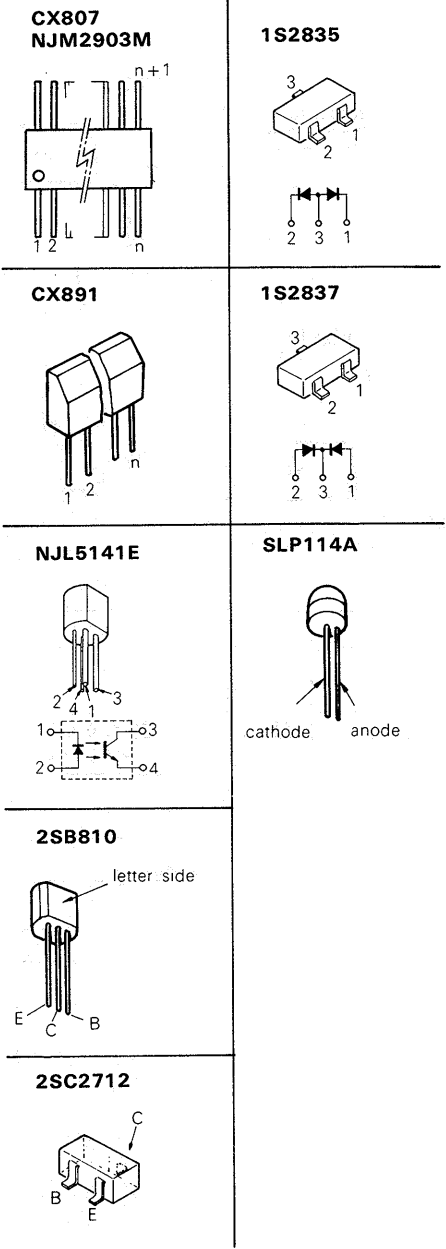
Soldering portion	5 kHz Level
(A) + (B)	down
(A)	↑
(B)	up



SECTION 4  
DIAGRAMS

4-1. MOUNTING DIAGRAM  
— Conductor Side —

Semiconductors Lead Layout



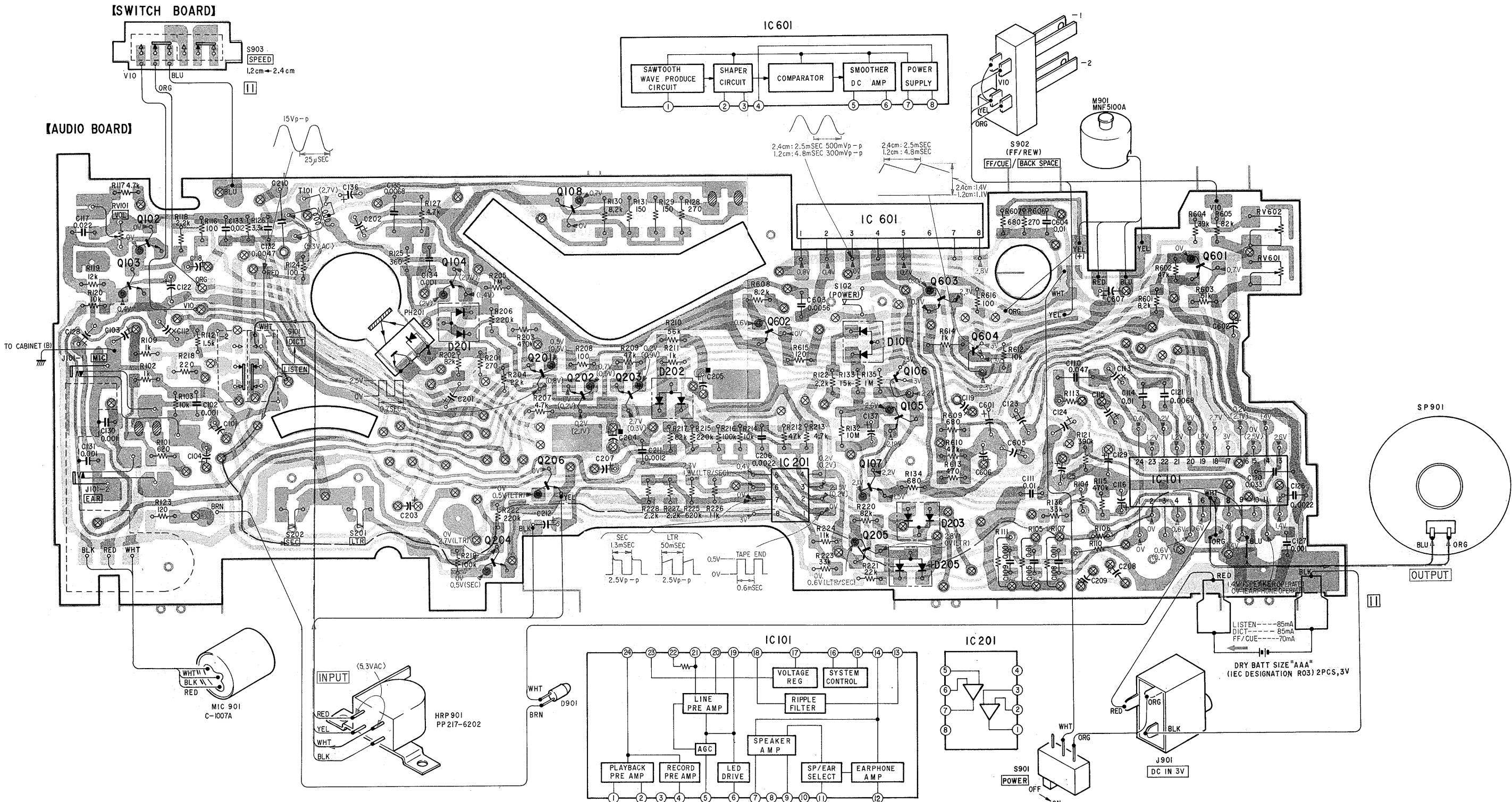
Note:

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- ⊗ : Through hole.
- ▨ : component-side pattern.
- ⊙ : B + pattern
- : signal path
- : L-CH signal path
- : R-CH signal path

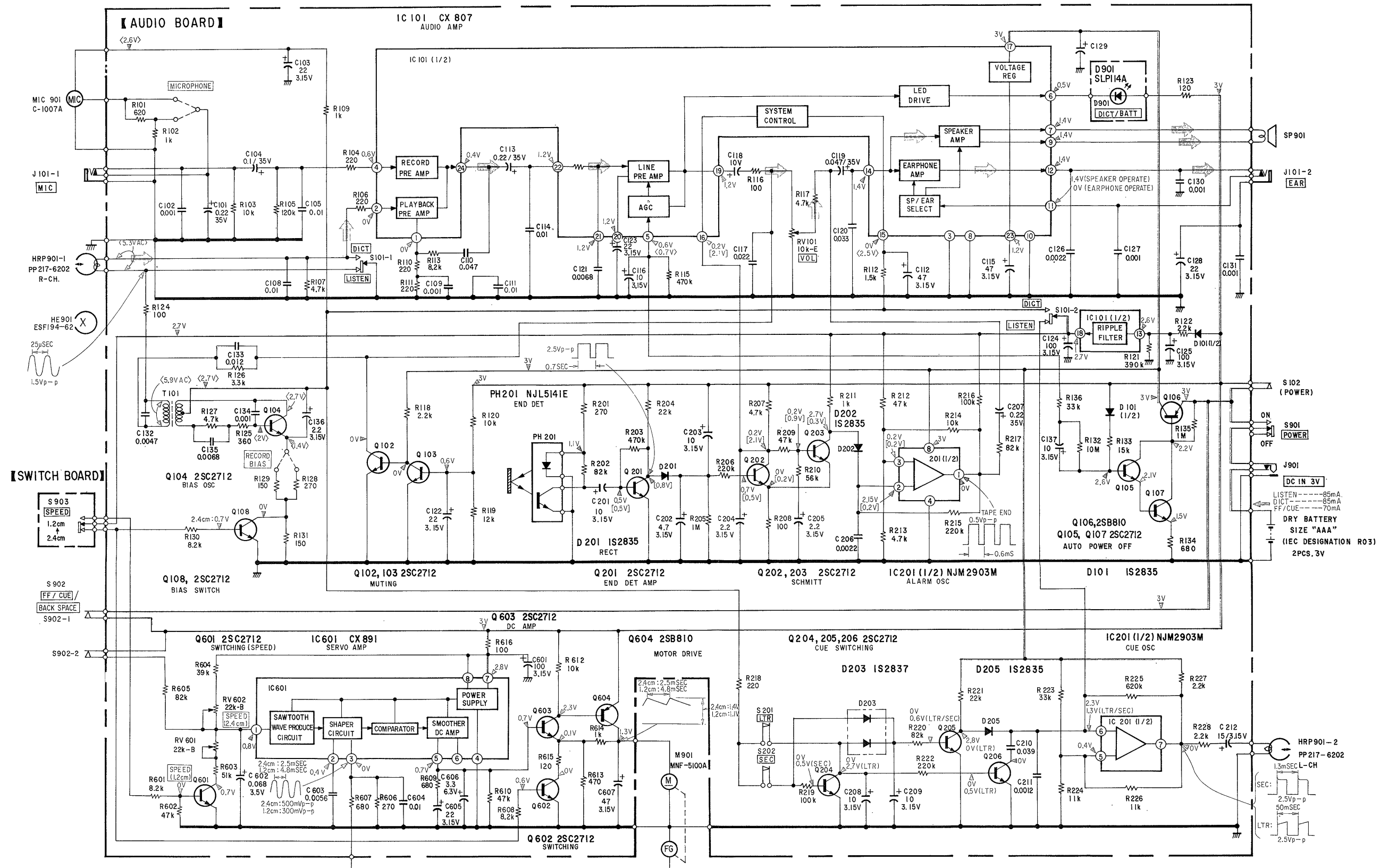
SEE ADDITIONAL  
INFORMATION

SEE ADDITIONAL  
INFORMATION

	A	B	C	D	E	F	G
Q	102			108			
IC	103	PH201	104	201	202	203	601
		204	206	205	101	203	604
D		201	202				



#### 4-2. SCHEMATIC DIAGRAM



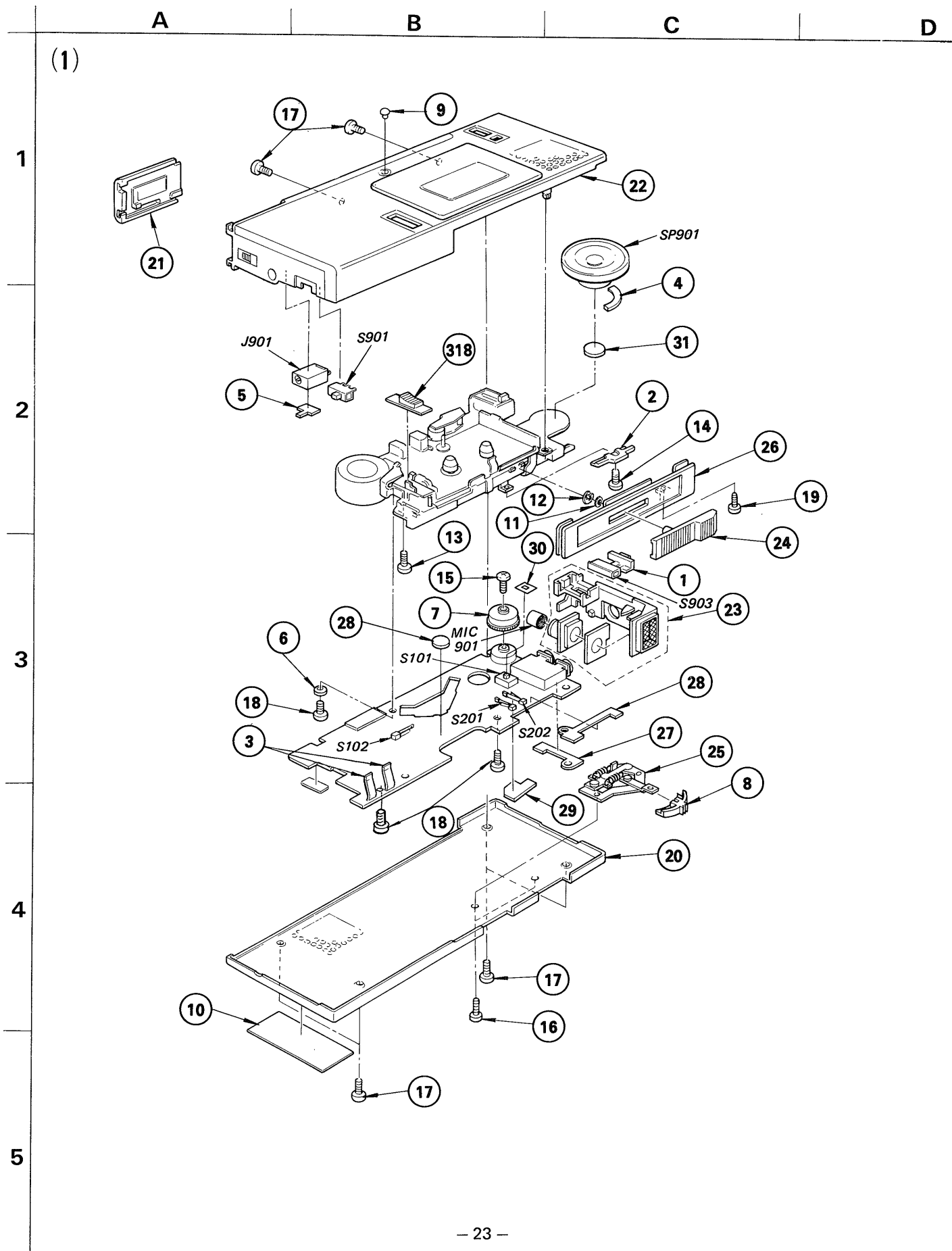
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF} : \mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms,  $\frac{1}{8}$  or  $\frac{1}{10}\text{W}$  unless otherwise noted.  
k $\Omega$ : 1000 $\Omega$ , M $\Omega$ : 1000k $\Omega$
- : panel designation.

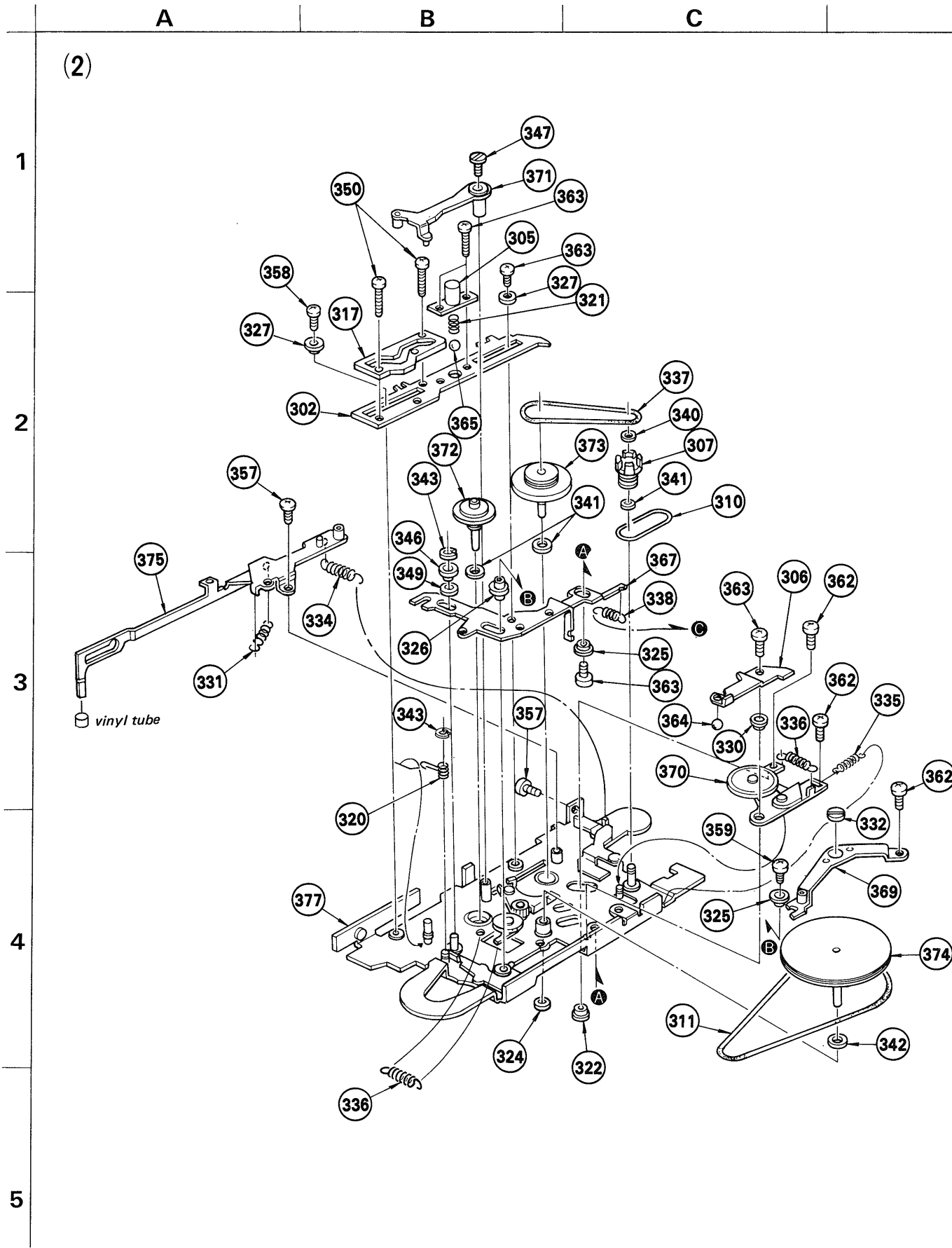
- ☐ : adjustment for repair.
- ☐ : B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.

- Readings are taken under no-signal conditions with a VOM (20 k $\Omega$ /V).  
mark: LISTEN  
[ ]: tape end  
< >: DICT
- AC voltage readings in the bias oscillator with a VTVM.

# SECTION 5

## EXPLODED VIEWS AND PARTS LIST

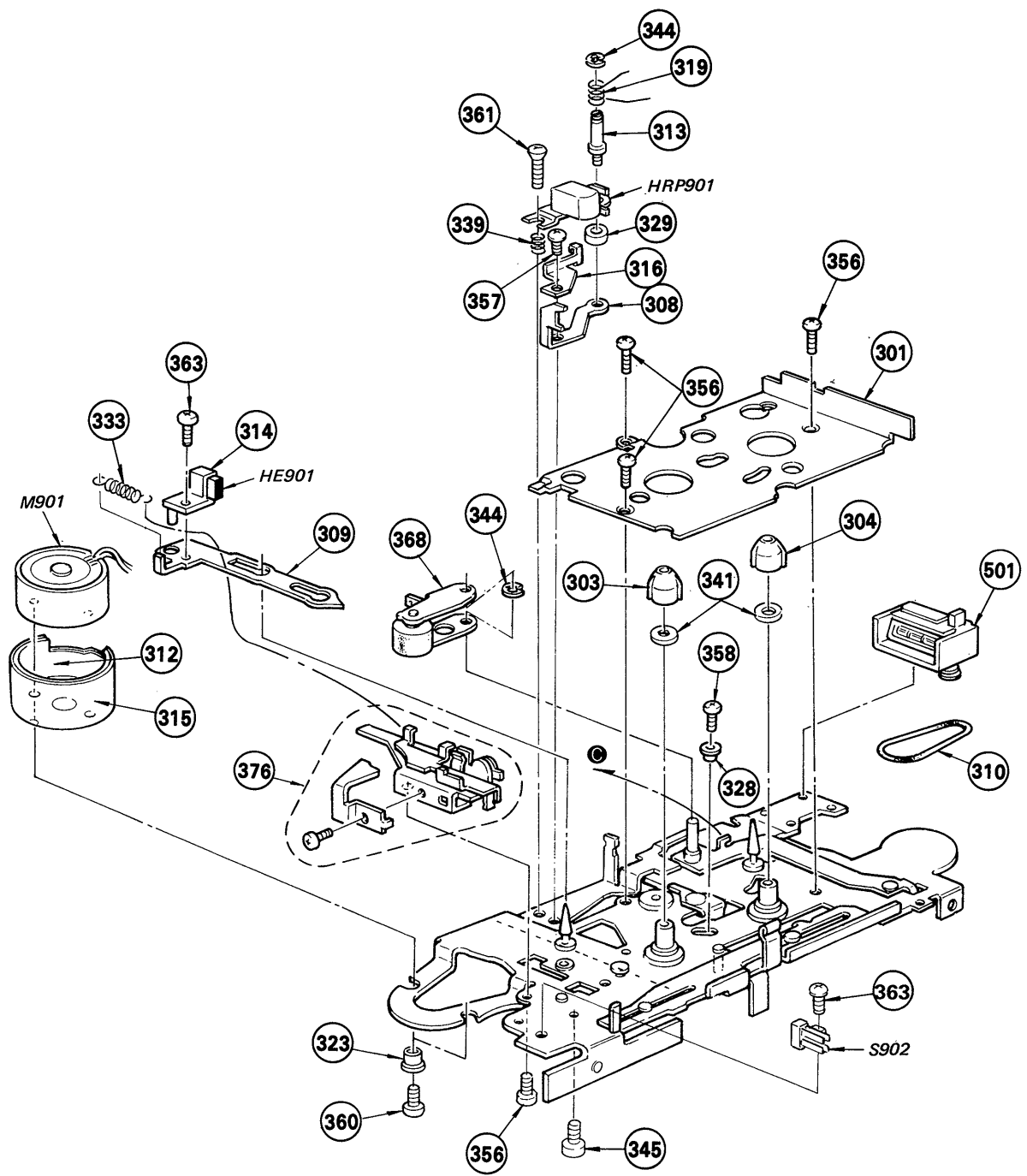




(3)

1  
2  
3  
4  
5

A B C



## GENERAL SECTION

No.	Part No.	Description
1	3-302-405-00	KNOB, SPEED SELECTION
2	3-306-107-00	BUTTON, FF
3	3-302-409-00	SPRING
4	3-302-411-00	FILM, MASK, LED
5	3-302-410-00	STOPPER, JACK
6	3-302-545-00	SPACER, THRUST PLATE
7	3-570-412-00	KNOB, CONTROL
8	3-306-106-00	BUTTON, MARKER
9	3-578-232-00	ORNAMENT, ADJUSTMENT HOLE
10	3-306-101-00	LABEL, MODEL NUMBER
11	3-701-437-01	WASHER
12	7-624-102-04	STOP RING 1.5, TYPE -E
13	7-627-551-27	SCREW, PRECISION +P 1.4X2.5
14	7-627-551-17	SCREW, PRECISION +P 1.4X2
15	7-627-552-37	SCREW, PRECISION +P 1.7X3
16	7-627-451-08	SCREW, PRECISION +K 1.4X1.6
17	7-627-551-28	SCREW, PRECISION +P 1.4X2.5
18	7-627-850-27	SCREW, PRECISION +P 1.4X3
19	7-627-850-67	SCREW, PRECISION +P 1.4X4
20	X-3306-101-0	CABINET (LOWER) ASSY
21	A-3040-415-A	LID ASSY, BATTERY CASE
22	X-3302-420-3	CABINET ASSY
23	X-3302-423-1	CABINET (B) ASSY
24	X-3306-107-1	CONTROL BUTTON ASSY
25	3-3306-102-0	CHASSIS ASSY, MARKER
26	3-302-437-00	CABINET (C)
27	3-302-544-00	SHEET, SHIELD
28	3-306-111-00	SHEET (A), INSULATING
29	3-306-120-00	SHEET, INSULATING (B)
30	3-570-921-00	SPACER, SWITCH
31	9-911-844-XX	CUSHION, SPEAKER

## ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
51	1-504-059-11	MAGNETIC EARPHONE (ME-20H)
52	1-506-309-00	PLUG, SHORT (SP-100)
53	3-302-414-00	CUSHION
54	3-302-415-00	SPACER
55	3-302-552-00	CASE (A), CARRYING
56	3-306-118-00	INDIVIDUAL CARTON
57	3-570-631-00	BAG, POLYETHYLENE
58	3-701-620-00	BAG, POLYETHYLENE
59	3-701-622-00	BAG, POLYETHYLENE
60	3-773-202-11	(AEP)...MANUAL, INSTRUCTION
61	3-773-202-21	(US)...MANUAL, INSTRUCTION
62	8-891-109-00	TAPE MC-60BM(S)
63	X-3701-105-0	ROD ASSY, CLEANING, HEAD

### NOTE:

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- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

### CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.  
MF: μF, PF: μμF.

### RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

### COILS

- MMH : mH, UH : μH

### SEMICONDUCTORS

In each case, U : μ, for example:  
UA...: μA..., UPA...: μPA..., UPC...: μPC,  
UPD...: μPD...

## MECHANISM SECTION

No.	Part No.	Description
301	3-302-413-00	PANEL, SUB
302	3-302-457-00	LEVER, CONTROL
303	3-302-459-00	CLAW (S), REEL
304	3-302-460-00	CLAW (T), REEL
305	3-302-461-00	RETAINER, SPRING
306	3-302-462-00	RETAINER, H CHASSIS
307	3-302-463-00	PULLEY, RELAY
308	3-302-464-00	GUIDE, TAPE
309	3-302-465-00	LEVER, ERASE HEAD
310	3-302-470-00	BELT (10.7X0.5)
311	3-302-471-00	BELT (38X0.6)
312	3-302-472-00	CASE, SHIELD
313	3-302-473-00	SHAFT, FITTING, HEAD
314	3-302-474-00	BRACKET, ERASE HEAD
315	3-302-475-00	COVER, MOTOR
316	3-302-476-00	CLAMP
317	3-302-479-00	GUIDE, CONTROL
318	3-302-484-11	KNOB, E
319	3-302-488-00	SPRING
320	3-302-490-00	SPRING
321	3-302-492-00	SPRING, COMPRESSION
322	3-302-495-00	GUIDE, ARM, FWD
323	3-302-502-00	SPACER, MOTOR
324	3-302-553-00	RESERVOIR, OIL
325	3-302-534-00	GUIDE (A), H CHASSIS
326	3-302-535-00	GUIDE (C), H CHASSIS
327	3-302-536-00	GUIDE, CONTROL LEVER
328	3-302-537-00	GUIDE, R ARM
329	3-302-540-00	SPACER, HEAD
330	3-302-541-00	BUSHING, FWD ARM
331	3-527-188-00	SPRING, TENSION
332	3-547-625-00	SCREW, THRUST ADJUST
333	3-547-664-00	SPRING, TENSION
334	3-547-669-00	SPRING, TENSION
335	3-559-402-00	SPRING, TENSION
336	3-561-634-00	SPRING, TENSION
337	3-561-645-00	BELT, C
338	3-570-552-00	SPRING, TENSION
339	3-570-558-00	SPRING, COMPRESSION
340	3-570-615-00	POLY-WASHER (DIA.1.2)
341	3-701-436-01	WASHER, 1.6
342	3-701-436-11	WASHER, 1.6
343	7-624-101-04	STOP RING 1.2 (E TYPE)
344	7-624-102-04	STOP RING 1.5, TYPE -E
345	7-627-451-37	SCREW, PRECISION +K 1.4X2

## MECHANISM SECTION

No.	Part No.	Description
346	3-302-559-00	ROLLER, GUIDE, H PC BOARD
347	3-306-116-00	SCREW, FITTING, ARM
348	.....	
349	3-701-439-01	WASHER
350	7-627-451-57	SCREW, PRECISION +K 1.4X4
356	7-627-551-07	SCREW, PRECISION +P 1.4X1.6
357	7-627-551-17	SCREW, PRECISION +P 1.4X2
358	7-627-551-27	SCREW, PRECISION +P 1.4X2.5
359	7-627-851-27	SCREW, PRECISION +P 1.4X5
360	7-627-551-77	SCREW, PRECISION +P 1.4X4 TYPE1
361	7-627-552-57	SCREW, PRECISION +P 1.7X5
362	7-627-850-07	SCREW, PRECISION +P 1.4X2
363	7-627-850-17	SCREW, PRECISION +P 1.4X2.5
364	7-671-111-11	STEEL, BOUL 1.5MM
365	7-671-113-01	BALL, STEEL 3MM
366	A-3015-170-A	MOUNT BLOCK ASSY, AUDIO
367	X-3302-403-2	CHASSIS ASSY, HEAD
368	X-3302-409-0	PINCH LEVER ASSY
369	X-3302-410-0	PLATE ASSY, THRUST
370	X-3302-412-0	ARM ASSY, FWD
371	X-3302-413-0	ARM ASSY, JOINT
372	X-3302-414-0	TABLE ASSY, REEL, S
373	X-3302-415-0	TABLE ASSY, REEL, TAKE-UP
374	X-3302-416-0	FLYWHEEL ASSY
375	X-3306-104-0	BRACKET ASSY, FF
376	X-3302-418-0	LEVER ASSY, E FUNCTION
377	X-3302-419-5	CHASSIS ASSY, MECHANICAL

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- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.  
MF:μF, PF:μμF.

## RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F: nonflammable

## COILS

- MMH: mH, UH: μH

## SEMICONDUCTORS

- In each case, U: μ, for example:  
UA...: μA..., UPA...: μPA..., UPC...: μPC,  
UPD...: μPD...

SEE ADDITIONAL INFORMATION

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
501	1-548-516-00	TIMER, TAPE			
502	1-605-556-00	PC BOARD, SWITCH			
C101	1-131-404-00	TANTALUM 0.22MF	20%	35V	
C102	1-163-009-91	CHIP COMPONENT 0.001MF	10%	50V	
C103	1-131-391-00	TANTALUM 22MF	20%	3.15V	
C104	1-131-402-00	TANTALUM 0.1MF	20%	35V	
C105	1-163-021-00	CHIP COMPONENT 0.01MF	10%	50V	
C108	1-163-021-00	CHIP COMPONENT 0.01MF	10%	50V	
C109	1-163-009-91	CHIP COMPONENT 0.001MF	10%	50V	
C110	1-163-080-91	CHIP COMPONENT 0.047MF	10%	25V	
C111	1-163-021-00	CHIP COMPONENT 0.01MF	10%	50V	
C112	1-131-393-00	TANTALUM 47MF	20%	3.15V	
C113	1-131-404-00	TANTALUM 0.22MF	20%	35V	
C114	1-163-021-00	CHIP COMPONENT 0.01MF	10%	50V	
C115	1-131-393-00	TANTALUM 47MF	20%	3.15V	
C116	1-131-426-00	TANTALUM 10MF	20%	3.15V	
C117	1-163-037-00	CHIP COMPONENT 0.022MF	10%	25V	
C118	1-131-418-00	TANTALUM 1MF	20%	10V	
C119	1-131-400-00	TANTALUM 0.047MF	20%	35V	
C120	1-163-078-91	CHIP COMPONENT 0.033MF	10%	25V	
C121	1-163-019-91	CHIP COMPONENT 0.0068MF	10%	50V	
C122	1-131-391-00	TANTALUM 22MF	20%	3.15V	
C123	1-131-391-00	TANTALUM 22MF	20%	3.15V	
C124	1-131-395-00	TANTALUM 100MF	20%	3.15V	
C125	1-131-395-00	TANTALUM 100MF	20%	3.15V	
C126	1-163-013-00	CHIP COMPONENT 0.0022MF	10%	50V	
C127	1-163-009-91	CHIP COMPONENT 0.001MF	10%	50V	
C128	1-131-391-00	TANTALUM 22MF	20%	3.15V	
C129	1-131-387-00	TANTALUM 47MF	20%	6.3V	
C130	1-163-047-00	CHIP COMPONENT 0.001MF	10%	50V	
C131	1-163-047-00	CHIP COMPONENT 0.001MF	10%	50V	
C132	1-163-017-91	CHIP COMPONENT 0.0047MF	10%	50V	
C133	1-163-022-91	CHIP COMPONENT 0.012MF	10%	50V	
C134	1-163-009-91	CHIP COMPONENT 0.001MF	10%	50V	
C135	1-163-057-91	CHIP COMPONENT 0.0068MF	10%	50V	
C136	1-131-424-00	TANTALUM 2.2MF	20%	3.15V	
C137	1-131-426-00	TANTALUM 10MF	20%	3.15V	
C201	1-131-426-00	TANTALUM 10MF	20%	3.15V	
C202	1-131-425-00	TANTALUM 4.7MF	20%	3.15V	
C203	1-131-426-00	TANTALUM 10MF	20%	3.15V	
C204	1-131-424-00	TANTALUM 2.2MF	20%	3.15V	
C205	1-131-424-00	TANTALUM 2.2MF	20%	3.15V	
C206	1-163-013-00	CHIP COMPONENT 0.0022MF	10%	50V	
C207	1-131-404-00	TANTALUM 0.22MF	20%	35V	

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C208	1-131-390-00	TANTALUM 15MF	10%	3.15V	
C209	1-131-426-00	TANTALUM 10MF	20%	3.15V	
C210	1-130-627-00	MYLAR 0.039MF	5%	50V	
C211	1-163-143-91	CHIP COMPONENT 0.0012MF	5%	50V	
C212	1-131-390-00	TANTALUM 15MF	20%	3.15V	
C601	1-131-395-00	TANTALUM 100MF	20%	3.15V	
C602	1-131-401-00	TANTALUM 0.068MF	20%	35V	
C603	1-163-018-91	CHIP COMPONENT 0.0056MF	10%	50V	
C604	1-163-021-00	CHIP COMPONENT 0.01MF	10%	50V	
C605	1-131-391-00	TANTALUM 22MF	20%	3.15V	
C606	1-131-422-00	TANTALUM 3.3MF	20%	6.3V	
C607	1-131-393-00	TANTALUM 47MF	20%	3.15V	
D101	8-719-100-03	DIODE 1S2835			
D201	8-719-100-03	DIODE 1S2835			
D202	8-719-100-03	DIODE 1S2835			
D203	8-719-100-05	DIODE 1S2837			
D205	8-719-100-03	DIODE 1S2835			
D901	8-719-921-14	DIODE SLP-114A			
HE901	8-658-099-00	ESF194-62			
HRP901	8-825-533-00	HEAD, REC/PB (PP217-6202B)			
IC101	8-759-608-07	IC CX-807			
IC201	8-759-700-07	IC NJM2903M			
IC601	8-759-608-91	IC CX-891			
J101	1-507-622-00	JACK, 2P			
J901	1-507-625-00	JACK, POWER			
M901	8-835-064-01	MOTOR, DC (MNF-5100A)			
MIC901	8-814-189-00	MICROPHONE, BUILT-IN (C-1007A)			
PH201	8-719-751-42	DIODE NJL5141E			
Q102	8-729-271-22	TRANSISTOR 2SC2712			
Q103	8-729-271-22	TRANSISTOR 2SC2712			
Q104	8-729-271-22	TRANSISTOR 2SC2712			
Q105	8-729-271-22	TRANSISTOR 2SC2712			
Q106	8-729-181-13	TRANSISTOR 2SB811			
Q107	8-729-271-22	TRANSISTOR 2SC2712			
Q108	8-729-271-22	TRANSISTOR 2SC2712			
Q201	8-729-271-22	TRANSISTOR 2SC2712			
Q202	8-729-271-22	TRANSISTOR 2SC2712			
Q203	8-729-271-22	TRANSISTOR 2SC2712			
Q204	8-729-271-22	TRANSISTOR 2SC2712			
Q205	8-729-271-22	TRANSISTOR 2SC2712			
Q206	8-729-271-22	TRANSISTOR 2SC2712			
Q601	8-729-271-22	TRANSISTOR 2SC2712			
Q602	8-729-271-22	TRANSISTOR 2SC2712			

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### CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF, PF: μμF.

### RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F: nonflammable

### COILS

- MMH: mH, UH: μH

### SEMICONDUCTORS

- In each case, U: μ, for example:  
UA...: μA..., UPA...: μPA..., UPC...: μPC,  
UPD...: μPD...



## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
Q603	8-729-271-22	TRANSISTOR 2SC2712			
Q604	8-729-181-13	TRANSISTOR 2SB811			
R101	1-216-044-00	CHIP COMPONENT 620	5%	1/10W	
R102	1-216-049-00	CHIP COMPONENT 1K	5%	1/10W	
R103	1-216-073-00	CHIP COMPONENT 10K	5%	1/10W	
R104	1-246-775-00	CARBON 220	5%	1/8W	
R105	1-246-808-00	CARBON 120K		1/8W	
R106	1-246-775-00	CARBON 220	5%	1/8W	
R107	1-246-791-00	CARBON 4.7K		1/8W	
R109	1-216-049-00	CHIP COMPONENT 1K	5%	1/10W	
R110	1-246-775-00	CARBON 220		1/8W	
R111	1-246-775-00	CARBON 220		1/8W	
R112	1-216-053-00	CHIP COMPONENT 1.5K	5%	1/10W	
R113	1-246-794-00	CARBON 8.2K	5%	1/8W	
R115	1-216-113-00	CHIP COMPONENT 470K	5%	1/10W	
R116	1-216-025-00	CHIP COMPONENT 100	5%	1/10W	
R117	1-216-065-00	CHIP COMPONENT 4.7K	5%	1/10W	
R118	1-216-057-00	CHIP COMPONENT 2.2K	5%	1/10W	
R119	1-216-075-00	CHIP COMPONENT 12K	5%	1/10W	
R120	1-216-073-00	CHIP COMPONENT 10K	5%	1/10W	
R121	1-216-111-91	CHIP COMPONENT 390K	5%	1/10W	
R122	1-216-057-00	CHIP COMPONENT 2.2K	5%	1/10W	
R123	1-216-027-00	CHIP COMPONENT 120	5%	1/10W	
R124	1-216-025-00	CHIP COMPONENT 100	5%	1/10W	
R125	1-216-038-00	CHIP COMPONENT 360	5%	1/10W	
R126	1-216-061-00	CHIP COMPONENT 3.3K	5%	1/10W	
R127	1-216-214-91	CHIP COMPONENT 4.7K	5%	1/8W	
R128	1-216-184-91	CHIP COMPONENT 270	5%	1/8W	
R129	1-216-178-00	CHIP COMPONENT 150	5%	1/8W	
R130	1-216-220-91	CHIP COMPONENT 8.2K	5%	1/8W	
R131	1-216-178-00	CHIP COMPONENT 150	5%	1/8W	
R132	1-216-294-91	CHIP COMPONENT 10M	5%	1/8W	
R133	1-216-077-00	CHIP COMPONENT 15K	5%	1/10W	
R134	1-216-045-00	CHIP COMPONENT 680	5%	1/10W	
R135	1-216-121-00	CHIP COMPONENT 1M	5%	1/10W	
R136	1-216-085-00	CHIP COMPONENT 33K	5%	1/10W	
R201	1-216-035-00	CHIP COMPONENT 270	5%	1/10W	
R202	1-216-095-00	CHIP COMPONENT 82K	5%	1/10W	
R203	1-216-113-00	CHIP COMPONENT 470K	5%	1/10W	
R204	1-216-081-00	CHIP COMPONENT 22K	5%	1/10W	
R205	1-216-121-00	CHIP COMPONENT 1M	5%	1/10W	
R206	1-216-105-00	CHIP COMPONENT 220K	5%	1/10W	
R207	1-216-065-00	CHIP COMPONENT 4.7K	5%	1/10W	
R208	1-216-025-00	CHIP COMPONENT 100	5%	1/10W	

## ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R209	1-216-089-00	CHIP COMPONENT 47K	5%	1/10W	
R210	1-216-091-00	CHIP COMPONENT 56K	5%	1/10W	
R211	1-216-049-00	CHIP COMPONENT 1K	5%	1/10W	
R212	1-216-089-00	CHIP COMPONENT 47K	5%	1/10W	
R213	1-216-065-00	CHIP COMPONENT 4.7K	5%	1/10W	
R214	1-216-073-00	CHIP COMPONENT 10K	5%	1/10W	
R215	1-216-105-00	CHIP COMPONENT 220K	5%	1/10W	
R216	1-216-097-00	CHIP COMPONENT 100K	5%	1/10W	
R217	1-216-095-00	CHIP COMPONENT 82K	5%	1/10W	
R218	1-216-033-00	CHIP COMPONENT 220	5%	1/10W	
R219	1-216-097-00	CHIP COMPONENT 100K	5%	1/10W	
R220	1-216-095-00	CHIP COMPONENT 82K	5%	1/10W	
R221	1-216-081-00	CHIP COMPONENT 22K	5%	1/10W	
R222	1-216-105-00	CHIP COMPONENT 220K	5%	1/10W	
R223	1-216-085-00	CHIP COMPONENT 33K	5%	1/10W	
R224	1-216-074-91	CHIP COMPONENT 11K	5%	1/10W	
R225	1-216-116-91	CHIP COMPONENT 620K	5%	1/10W	
R226	1-216-074-91	CHIP COMPONENT 11K	5%	1/10W	
R227	1-216-057-00	CHIP COMPONENT 2.2K	5%	1/10W	
R228	1-216-057-00	CHIP COMPONENT 2.2K	5%	1/10W	
R601	1-216-071-91	CHIP COMPONENT 8.2K	5%	1/10W	
R602	1-216-089-00	CHIP COMPONENT 47K	5%	1/10W	
R603	1-216-090-91	CHIP COMPONENT 51K	5%	1/10W	
R604	1-216-087-00	CHIP COMPONENT 39K	5%	1/10W	
R605	1-216-095-00	CHIP COMPONENT 82K	5%	1/10W	
R606	1-216-035-00	CHIP COMPONENT 270	5%	1/10W	
R607	1-216-045-00	CHIP COMPONENT 680	5%	1/10W	
R608	1-216-071-91	CHIP COMPONENT 8.2K	5%	1/10W	
R609	1-216-045-00	CHIP COMPONENT 680	5%	1/10W	
R610	1-216-089-00	CHIP COMPONENT 47K	5%	1/10W	
R612	1-216-073-00	CHIP COMPONENT 10K	5%	1/10W	
R613	1-216-041-00	CHIP COMPONENT 470	5%	1/10W	
R614	1-216-198-91	CHIP COMPONENT 1K	5%	1/8W	
R615	1-216-027-00	CHIP COMPONENT 120	5%	1/10W	
R616	1-216-025-00	CHIP COMPONENT 100	5%	1/10W	
RV101	1-226-743-00	RES, VAR, CARBON 10K (VOL)			
RV601	1-228-356-00	RES, ADJ, METAL GLAZE 22K			
RV602	1-228-356-00	RES, ADJ, METAL GLAZE 22K			
S101	1-553-223-00	SWITCH, SLIDE (DICT/LISTEN)			
S102	1-553-817-00	SWITCH, LEAF (POWER)			
S201	1-553-817-00	SWITCH, LEAF (LTR)			
S202	1-554-297-00	SWITCH, LEAF (SEC)			
S901	1-553-197-21	SWITCH, SLIDE (POWER)			
S903	1-553-280-00	SWITCH, SLIDE (SPEED)			
S902	1-553-818-00	SWITCH, LEAF (FF.CUE/BACK SPACE)			
SP901	1-502-896-21	SPEAKER			
T101	1-433-239-00	TRANSFORMER, BIAS OSCILLATOR			

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- MF:  $\mu\text{F}$ , PF:  $\mu\mu\text{F}$ .

## RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

## COILS

- MMH : mH, UH :  $\mu\text{H}$

## SEMICONDUCTORS

- In each case, U :  $\mu$ , for example:  
 UA...:  $\mu\text{A}$ ..., UPA...:  $\mu\text{PA}$ ..., UPC...:  $\mu\text{PC}$ ,  
 UPD...:  $\mu\text{PD}$ ...

## ELECTROLYTIC CAPACITORS

CAP. (μF)	RATING → : Use the high voltage rated one.					
	6.3 VOLT.	10 VOLT.	16 VOLT.	25 VOLT.	35 VOLT.	50 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.47					→	1-121-726-00
1.0					→	1-121-391-00
2.2					→	1-121-450-00
3.3	→	→	→	1-121-392-00	→	1-121-393-00
4.7	→	→	→	1-121-395-00	→	1-121-394-00
10	→	→	1-121-651-00	1-121-398-00	→	1-121-738-00
22	→	→	1-121-479-00	1-121-480-00	1-121-662-00	1-121-152-00
33	→	→	1-121-403-00	1-121-404-00	1-121-652-00	1-121-405-00
47	→	1-121-352-00	1-121-409-00	1-121-410-00	1-121-653-00	1-121-411-00
100	→	1-121-414-00	1-121-415-00	1-121-416-00	1-121-357-00	1-121-417-00
220	1-121-419-00	1-121-420-00	1-121-421-00	1-121-422-00	1-121-261-00	1-121-423-00
330	1-121-751-00	1-121-805-00	1-121-521-00	1-121-654-00	1-121-655-00	1-121-656-00
470	1-121-424-00	1-121-425-00	1-121-426-00	1-121-733-00	1-121-361-00	1-121-810-00
1000	—	1-121-736-00	1-121-245-00	1-121-657-00	1-121-388-00	1-123-061-00
2200	1-121-658-00	1-121-659-00	1-121-660-00	1-123-067-00	1-121-984-00	—
3300	1-121-661-00	1-123-075-00	1-123-071-00	—	—	—

CAP. (μF)	100 VOLT.	160 VOLT.	250 VOLT.	350 VOLT.
	PART No.	PART No.	PART No.	PART No.
0.47	—	—	—	—
1.0	1-123-249-00	1-123-252-00	1-123-003-00	1-121-168-00
2.2	1-123-250-00	1-123-026-00	—	1-123-028-00
3.3	1-121-995-00	—	1-123-004-00	1-123-006-00
4.7	1-123-255-00	1-121-246-00	1-121-759-00	1-123-007-00
10	1-121-126-00	1-121-999-00	1-123-254-00	1-123-008-00
22	1-121-996-00	1-123-253-00	1-123-005-00	1-123-022-00
33	1-121-997-00	1-121-757-00	—	—
47	1-123-251-00	1-121-919-00	—	—
100	1-123-084-00	—	—	—

## CERAMIC CAPACITORS

RATING							
CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (μF)	50 VOLT.
	PART No.		PART No.		PART No.		PART No.
0.5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00				

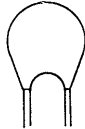
0.001μF = 1,000pF

## CERAMIC (SEMICONDUCTOR) CAPACITORS

RATING → : Use the high voltage rated one.					
CAP. (μF)	25 VOLT.	50 VOLT.	CAP. (μF)	25 VOLT.	50 VOLT.
	PART No.	PART No.		PART No.	PART No.
0.001	→	1-161-039-00	0.018	1-161-016-00	1-161-054-00
0.0012	→	1-161-040-00	0.022	1-161-017-00	1-161-055-00
0.0015		1-161-041-00	0.027	1-161-018-00	1-161-056-00
0.0018		1-161-042-00	0.033	1-161-019-00	1-161-057-00
0.0022		1-161-043-00	0.039	1-161-010-00	1-161-058-00
0.0027	→	1-161-044-00	0.047	1-161-021-00	1-161-059-00
0.0033	→	1-161-045-00	0.056	→	1-161-060-00
0.0039	→	1-161-046-00	0.068	→	1-161-061-00
0.0047	→	1-161-047-00	0.082	1-161-024-00	1-161-062-00
0.0056	→	1-161-048-00	0.1	1-161-025-00	1-161-063-00
0.0068	→	1-161-049-00			
0.0082	1-161-012-00	1-161-050-00			
0.01	1-161-013-00	1-161-051-00			
0.012	→	1-161-052-00			
0.015	1-161-015-00	1-161-053-00			

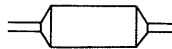
## MYLAR CAPACITORS

RATING											
CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.
PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-220-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00	—	—
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00	—	—
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00	—	—
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00	—	—
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00				
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				



## TANTALUM CAPACITORS

RATING → : Use the high voltage rated one.							
CAP. (μF)	3.15 VOLT.	6.3 VOLT.	10 VOLT.	16 VOLT.	20 VOLT.	25 VOLT.	35 VOLT.
PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.01					→	→	1-131-396-00
0.015					→	→	1-131-397-00
0.022					→	→	1-131-398-00
0.033					→	→	1-131-399-00
0.047					→	→	1-131-400-00
0.068					→	→	1-131-401-00
0.1					→	→	1-131-402-00
0.15					→	→	1-131-403-00
0.22					→	→	1-131-404-00
0.33					→	1-131-409-00	1-131-405-00
0.47	—	—	—	—	1-131-412-00	→	1-131-406-00
0.68	—	—	—	1-131-415-00	→	1-131-410-00	1-131-407-00
1.0	—	—	1-131-418-00	—	1-131-413-00	→	1-131-408-00
1.5	—	1-131-421-00	—	1-131-416-00	→	1-131-411-00	1-131-348-00
2.2	1-131-424-00	—	1-131-419-00	—	1-131-414-00	1-131-355-00	1-131-349-00
3.3	—	1-131-422-00	—	1-131-417-00	1-131-362-00	1-131-356-00	1-131-350-00
4.7	1-131-425-00	—	1-131-420-00	1-131-369-00	1-131-363-00	1-131-357-00	1-131-351-00
6.8	—	1-131-423-00	1-131-376-00	1-131-370-00	1-131-364-00	1-131-358-00	1-131-352-00
10	1-131-426-00	1-131-383-00	1-131-377-00	1-131-371-00	1-131-365-00	1-131-359-00	1-131-353-00
15	1-131-390-00	1-131-384-00	1-131-378-00	1-131-372-00	1-131-366-00	1-131-360-00	—
22	1-131-391-00	1-131-385-00	1-131-379-00	1-131-373-00	1-131-367-00		
33	1-131-392-00	1-131-386-00	1-131-380-00	1-131-374-00			
47	1-131-393-00	1-131-387-00	1-131-381-00	—			
68	1-131-394-00	1-131-388-00	—	—			
100	1-131-395-00	—	—	—			



## TANTALUM CAPACITORS

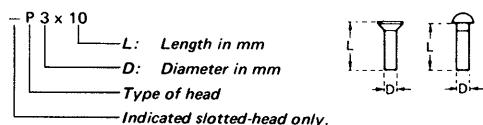
RATING						
CAP. (μF)	3 VOLT.	6.3 VOLT.	10 VOLT.	16 VOLT.	20 VOLT.	35 VOLT.
PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.033						1-131-273-00
0.047						1-131-274-00
0.068						1-131-275-00
0.1						1-131-276-00
0.15						1-131-277-00
0.22			—	—	1-131-262-00	1-131-278-00
0.33			—	—	1-131-263-00	1-131-279-00
0.47			1-131-169-00	—	1-131-264-00	1-131-280-00
0.68			—	1-131-258-00	1-131-265-00	1-131-281-00
1.0			1-131-254-00	—	1-131-266-00	1-131-282-00
1.5		1-131-250-00	—	—	1-131-267-00	1-131-283-00
2.2		—	—	1-131-259-00	1-131-268-00	1-131-284-00
3.3		—	1-131-255-00	—	1-131-269-00	—
4.7		1-131-251-00	1-131-171-00	—	1-131-270-00	—
6.8		—	—	1-131-260-00	1-131-271-00	—
10	—	—	1-131-256-00	—	1-131-272-00	—
15	—	1-131-252-00	—	1-131-261-00		
22	—	—	1-131-257-00	—		
33	1-131-176-00	1-131-253-00	1-131-173-00	—		
47	1-131-288-00	1-131-174-00	—	—		
100	1-131-177-00					

**1/4 WATT CARBON RESISTORS**

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

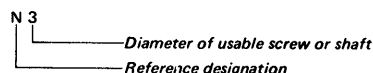
**HARDWARE NOMENCLATURE**

Screw:



Unless otherwise indicated, it means cross-recessed head (Phillips type).

Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
<b>SCREWS</b>			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazer-head screw	

Reference Designation	Shape	Description	Remarks
<b>SELF-TAPPING SCREWS</b>			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
<b>SET SCREWS</b>			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
<b>NUT</b>			
N		nut	
<b>WASHERS</b>			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
<b>RETAINING RINGS</b>			
E		retaining ring	
G		grip-type retaining ring	

**Sony Corporation**

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# BM-550

## SONY<sup>®</sup> SERVICE MANUAL

*US Model*  
*AEP Model*

### SUPPLEMENT-1

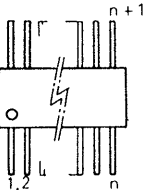


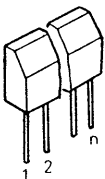


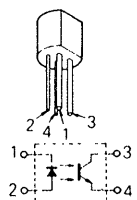
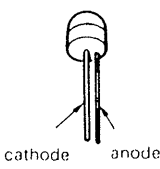
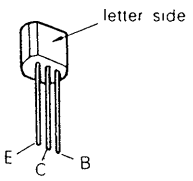
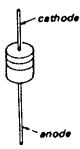
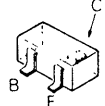
File this Supplement with the Service Manual.

Subject : Audio Board Change
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Audio board has been changed.

According to this change, printed wiring boards, schematic diagram  
and electrical parts list are added.

# Semiconductors Lead Layout

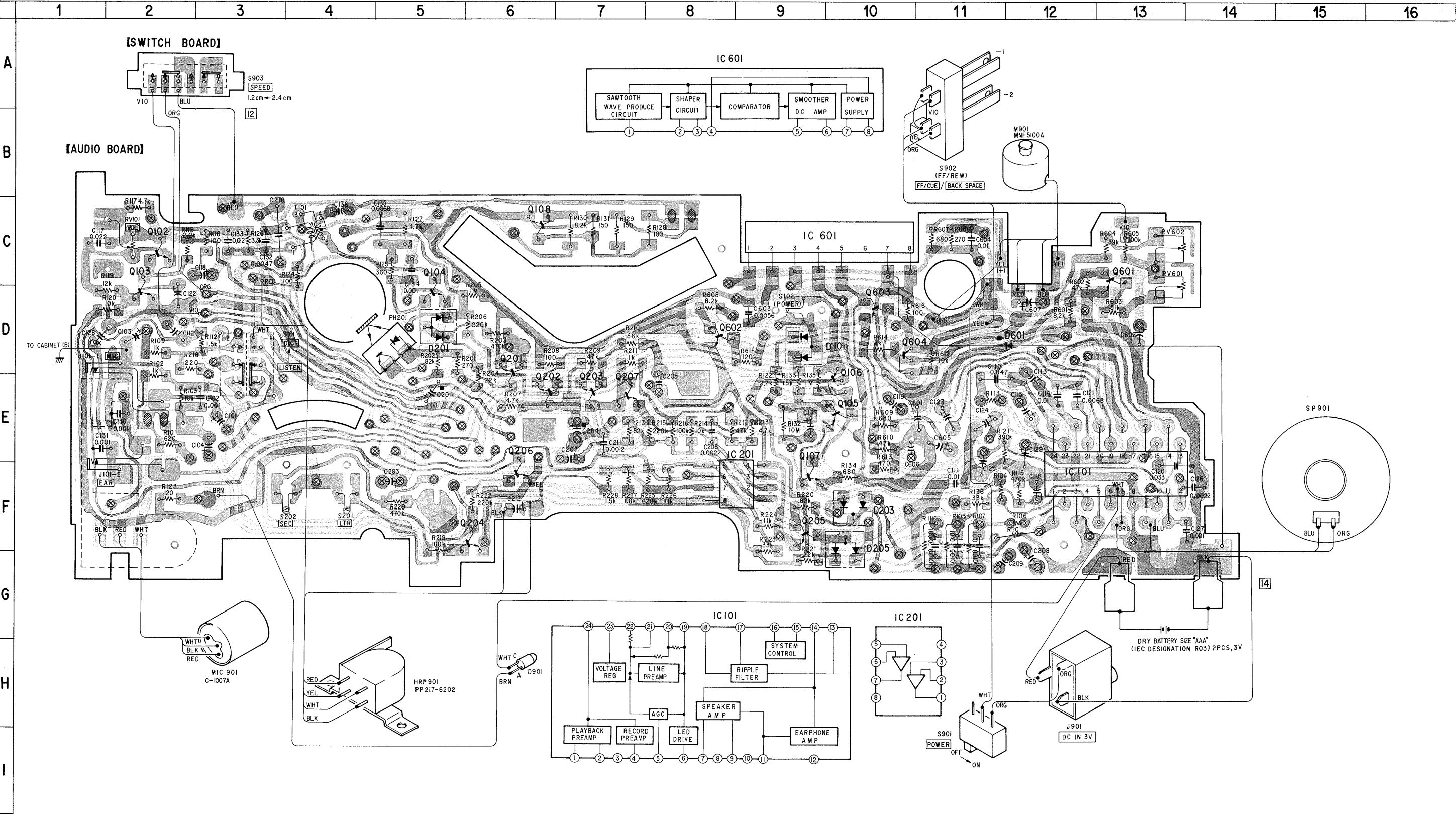
<p>CX807 NJM2903M</p> 	<p>1S2836</p>  
<p>CX891</p> 	<p>MA152WK</p>  
<p>NJL5141E</p> 	<p>SLP114A</p> 
<p>2SA1150</p> 	<p>RD2.4ES-B2</p> 
<p>2SC2712-G</p> 	

## ● SEMICONDUCTOR LOCATION

Ref. No.	Location
IC101	F-12
IC201	F-8
IC601	C-9
Q102	C-2
Q103	C-2
Q104	C-5
Q105	E-10
Q106	D-10
Q107	E-9
Q108	C-6
Q201	D-6
Q202	E-6
Q203	E-7
Q204	F-6
Q205	F-9
Q206	E-6
Q207	E-7
Q601	C-13
Q602	D-8
Q603	D-10
Q604	D-10
D101	D-9
D201	D-5
D203	F-10
D205	F-10
D601	D-11

1. PRINTED WIRING BOARDS

—Conductor Side—



Note :

- — : parts extracted from the component side.
- — : parts extracted from the conductor side.
- ⊗ : Through hole.
- ⊙ : Pattern on the side which is seen.
- ⊙ : Pattern of the rear side.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
---	---	---	---	---	---	---	---	---	----	----	----	----	----



- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF} : \mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms,  $\frac{1}{8}$  or  $\frac{1}{16}$  W unless otherwise noted.  $\text{k}\Omega : 1000\Omega, \text{M}\Omega : 1000\text{k}\Omega$
- **B+** : B+ Line
- : adjustment for repair.

➤ : LISTEN



### 3. ELECTRICAL PARTS LIST

#### NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

#### CAPACITORS:

MF:  $\mu$ F, PF:  $\mu$ F.

#### RESISTORS

- All resistors are in ohms.
- F: nonflammable

#### COILS

- MMH: mH, UH:  $\mu$ H

#### SEMICONDUCTORS

In each case, U:  $\mu$ , for example:

UA...:  $\mu$ A..., UPA...:  $\mu$ PA...,

UPC...:  $\mu$ PC, UPD...:  $\mu$ PD...

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
	★ A-3015-170-A	MOUNT BLOCK ASSY, AUDIO	C212	1-131-389-00	TANTALUM 10MF 20% 3.15V
	★ 1-605-556-00	PC BOARD, SWITCH	C601	1-131-395-00	TANTALUM 100MF 10% 3.15V
C101	1-131-404-00	TANTALUM 0.22MF 20% 35V	C602	1-131-401-00	TANTALUM 0.068MF 10% 35V
C102	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	C603	1-163-018-00	CERAMIC CHIP 0.0056MF 10% 50V
C103	1-131-391-00	TANTALUM 22MF 10% 3.15V	C604	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V
C104	1-131-402-00	TANTALUM 0.1MF 20% 35V	C605	1-131-391-00	TANTALUM 22MF 10% 3.15V
C105	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	C606	1-131-422-00	TANTALUM 3.3MF 20% 6.3V
C108	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	C607	1-131-393-00	TANTALUM 47MF 10% 3.15V
C109	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	D101	8-719-104-34	DIODE 1S2836
C110	1-163-075-00	CERAMIC CHIP 0.047MF 10% 25V	D201	8-719-104-34	DIODE 1S2836
C111	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	D203	8-719-400-18	DIODE MA152WK
C112	1-131-393-00	TANTALUM 47MF 10% 3.15V	D205	8-719-104-34	DIODE 1S2836
C113	1-131-404-00	TANTALUM 0.22MF 20% 35V	D601	8-719-109-57	DIODE RD2.4ES-B2
C114	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	D901	8-719-921-14	DIODE SLP-114A
C115	1-131-393-00	TANTALUM 47MF 10% 3.15V	HE901	8-825-772-01	HEAD, ERACE (ESF194-62G)
C116	1-131-389-00	TANTALUM 10MF 20% 3.15V	HRP901	1-543-321-11	HEAD, MAGNETIC (REC/PB)
C117	1-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	IC101	8-759-906-61	IC CX-807
C118	1-131-413-00	TANTALUM 1MF 20% 10V	IC201	8-759-981-65	IC LM2903M
C119	1-131-400-00	TANTALUM 0.047MF 20% 35V	IC601	8-759-904-68	IC CX-891
C120	1-163-078-11	CERAMIC CHIP 0.033MF 10% 25V	J101	1-507-622-00	JACK, 2P (MIC/EAR)
C121	1-163-019-00	CERAMIC CHIP 0.0068MF 10% 50V	J901	1-507-625-00	JACK, POWER (DC IN 3V)
C122	1-131-391-00	TANTALUM 22MF 10% 3.15V	M901	1-541-440-11	MOTOR
C123	1-131-391-00	TANTALUM 22MF 10% 3.15V	MIC901	8-814-189-31	MICROPHONE, BUILT-IN (C-1007A)
C124	1-131-395-00	TANTALUM 100MF 10% 3.15V	PH201	8-719-751-43	DIODE NJL5141E-AB
C125	1-131-395-00	TANTALUM 100MF 10% 3.15V	Q102	8-729-271-22	TRANSISTOR 2SC2712-G
C126	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	Q103	8-729-271-22	TRANSISTOR 2SC2712-G
C127	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	Q104	8-729-271-22	TRANSISTOR 2SC2712-G
C128	1-131-391-00	TANTALUM 22MF 10% 3.15V	Q105	8-729-271-22	TRANSISTOR 2SC2712-G
C129	1-131-381-00	TANTALUM 47MF 10% 6.3V	Q106	8-729-205-02	TRANSISTOR 2SA1150
C130	1-163-205-00	CERAMIC CHIP 0.001MF 10% 50V	Q107	8-729-271-22	TRANSISTOR 2SC2712-G
C131	1-163-205-00	CERAMIC CHIP 0.001MF 10% 50V	Q108	8-729-271-22	TRANSISTOR 2SC2712-G
C132	1-163-017-00	CERAMIC CHIP 0.0047MF 5% 50V	Q201	8-729-271-22	TRANSISTOR 2SC2712-G
C133	1-163-022-00	CERAMIC CHIP 0.012MF 10% 50V	Q202	8-729-271-22	TRANSISTOR 2SC2712-G
C134	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	Q203	8-729-271-22	TRANSISTOR 2SC2712-G
C135	1-163-057-00	CERAMIC CHIP 0.0068MF 10% 50V	Q204	8-729-271-22	TRANSISTOR 2SC2712-G
C136	1-131-419-00	TANTALUM 2.2MF 20% 3.15V	Q205	8-729-271-22	TRANSISTOR 2SC2712-G
C137	1-131-389-00	TANTALUM 10MF 20% 3.15V	Q206	8-729-271-22	TRANSISTOR 2SC2712-G
C201	1-131-389-00	TANTALUM 10MF 20% 3.15V	Q207	8-729-271-22	TRANSISTOR 2SC2712-G
C203	1-131-389-00	TANTALUM 10MF 20% 3.15V	Q601	8-729-271-22	TRANSISTOR 2SC2712-G
C204	1-131-419-00	TANTALUM 2.2MF 20% 3.15V	Q602	8-729-271-22	TRANSISTOR 2SC2712-G
C205	1-131-419-00	TANTALUM 2.2MF 20% 3.15V	Q603	8-729-271-22	TRANSISTOR 2SC2712-G
C206	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	Q604	8-729-205-02	TRANSISTOR 2SA1150
C207	1-131-404-00	TANTALUM 0.22MF 20% 35V			
C208	1-131-389-00	TANTALUM 10MF 20% 3.15V			
C209	1-131-389-00	TANTALUM 10MF 20% 3.15V			
C210	1-130-490-11	MYLAR 0.039MF 5% 50V			
C211	1-163-143-00	CERAMIC CHIP 0.0012MF 5% 50V			

Ref.No.	Part No.	Description			
R101	1-216-044-00	METAL GLAZE	620	5%	1/10W
R102	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R103	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R104	1-249-409-11	CARBON	220	5%	1/8W
R105	1-215-471-00	CARBON	120K	5%	1/8W
R106	1-249-409-11	CARBON	220	5%	1/8W
R107	1-249-425-11	CARBON	4.7K	5%	1/8W
R109	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R110	1-249-409-11	CARBON	220	5%	1/8W
R111	1-249-409-11	CARBON	220	5%	1/8W
R112	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R113	1-249-428-11	CARBON	8.2K	5%	1/8W
R115	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R116	1-216-025-00	METAL GLAZE	100	5%	1/10W
R117	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R118	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R119	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R120	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R121	1-216-111-00	METAL GLAZE	390K	5%	1/10W
R122	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R123	1-216-027-00	METAL GLAZE	120	5%	1/10W
R124	1-216-025-00	METAL GLAZE	100	5%	1/10W
R125	1-216-038-00	METAL GLAZE	360	5%	1/10W
R126	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R127	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R128	1-216-174-00	METAL GLAZE	100	5%	1/8W
R129	1-216-178-00	METAL GLAZE	150	5%	1/8W
R130	1-216-220-00	METAL GLAZE	8.2K	5%	1/8W
R131	1-216-029-00	METAL GLAZE	150	5%	1/10W
R132	1-216-294-00	METAL GLAZE	10M	5%	1/8W
R133	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R134	1-216-045-00	METAL GLAZE	680	5%	1/10W
R135	1-216-121-00	METAL GLAZE	1M	5%	1/10W
R136	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R201	1-216-035-00	METAL GLAZE	270	5%	1/10W
R202	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R203	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R204	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R205	1-216-121-00	METAL GLAZE	1M	5%	1/10W
R206	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R207	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R208	1-216-025-00	METAL GLAZE	100	5%	1/10W
R209	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R210	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R211	1-216-049-00	METAL GLAZE	1K	5%	1/10W

Ref.No.	Part No.	Description			
R212	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R213	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R214	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R215	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R216	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R217	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R218	1-216-033-00	METAL GLAZE	220	5%	1/10W
R219	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R220	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R221	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R222	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R223	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R224	1-216-074-00	METAL GLAZE	11K	5%	1/10W
R225	1-216-116-00	METAL GLAZE	620K	5%	1/10W
R226	1-216-074-00	METAL GLAZE	11K	5%	1/10W
R227	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R228	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R229	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R601	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R602	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R603	1-216-090-00	METAL GLAZE	51K	5%	1/10W
R604	1-216-748-11	METAL GLAZE	39K	5%	1/10W
R605	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R606	1-216-035-00	METAL GLAZE	270	5%	1/10W
R607	1-216-045-00	METAL GLAZE	680	5%	1/10W
R608	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R609	1-216-045-00	METAL GLAZE	680	5%	1/10W
R610	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R612	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R613	1-216-041-00	METAL GLAZE	470	5%	1/10W
R614	1-216-198-00	METAL GLAZE	1K	5%	1/8W
R615	1-216-027-00	METAL GLAZE	120	5%	1/10W
R616	1-216-025-00	METAL GLAZE	100	5%	1/10W
RV101	1-228-898-00	RES, VAR, CARBON 10K (VOL)			
RV601	1-228-356-00	RES, ADJ, METAL GLAZE 22K			
RV602	1-228-356-00	RES, ADJ, METAL GLAZE 22K			
S101	1-553-223-00	SWITCH, SLIDE (DICT/LISTEN)			
S102	1-553-817-00	SWITCH, LEAF (POWER)			
S201	1-554-297-00	SWITCH, LEAF (LTR)			
S202	1-553-817-00	SWITCH, LEAF (SEC)			
S901	1-553-197-00	SWITCH, SLIDE (POWER)			
S902	1-553-818-00	SWITCH, LEAF (FF/CUE/BACK SPACE)			
S903	1-553-280-21	SWITCH, SLIDE (SPEED)			
SP901	1-502-896-21	SPEAKER			
TI01	1-433-239-00	TRANSFORMER, BIAS OSCILLATOR			